



VANTAGE DATA CENTER DEVELOPMENT OF REGIONAL IMPACT

Douglasville, GA

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1 Project Description

This Development of Regional Impact (DRI) study was conducted to assess the impact of the proposed development of Vantage Date Center on the surrounding transportation network. The project site is located on Roberts Road in the city of Douglasville in Douglasville County, GA. The ±95.12-acre site is currently undeveloped. The proposed project consists of three three-story data center buildings totaling an area of 1,657,000 square feet. The anticipated buildout year for this project is 2025. A site location map is shown in **Figure 1**, and an aerial map is shown in **Figure 2**.

Access to the site is proposed via three (3) full access driveways on Roberts Road. An exit-only access driveway on Riverside Parkway will be dedicated for emergency purposes. A preliminary site plan is included in **Appendix A**. Data used in the analysis consisted of the preliminary site plan provided by the project engineers, peak hour traffic counts collected by NV5, and Georgia Department of Transportation (GDOT) web-based applications and published information.



Figure 1: Site Location Map



Figure 2: Aerial View of the Site Location

1.1 Zoning and Land Use

The trigger for this DRI process is rezoning. This site is currently zoned for PUD (Planned Unit Development), surrounded by PUD districts. Future land use description for the subject site is MUD (Mixed-Use Design). The site will be rezoned for Light Industrial.

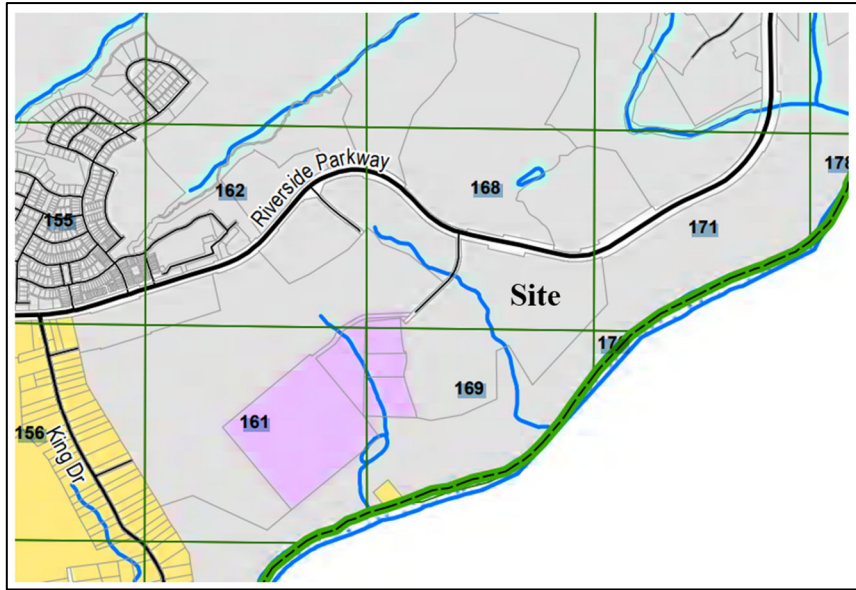


Figure 3: Zoning Map

2 Study Area

The study area for the proposed development was determined based on the nearest significant intersections from the site access driveways. Accordingly, the analysis considered the project's impact on the following intersections:

- Fairburn Road (SR 92) at Riverside Parkway (an existing three-leg signalized intersection)
- Riverside Parkway at Roberts Road (an existing three-leg stop-controlled intersection)
- Riverside Parkway at Thornton Road (SR 6) (an existing four-leg signalized intersection)
- Roberts Road at Site Driveway A (a proposed full access driveway)
- Roberts Road at Site Driveway B (a proposed full access driveway)
- Roberts Road at Site Driveway C (a proposed full access driveway)

3 Existing Conditions

3.1 Adjacent Roadway Facilities

Fairburn Road (SR 92) is a four-lane divided roadway and runs primarily south-north in the vicinity of the project site. The roadway is functionally classified by GDOT as an urban principal arterial-other and has a posted speed limit of 45 mph. Sidewalks are not provided along both sides of the roadway.

Riverside Parkway is a two-lane undivided roadway and runs primarily west-east in the study area. The roadway is functionally classified by GDOT as an urban minor arterial and has a posted speed limit of 45 mph. Sidewalks are not provided along both sides of the roadway. There are dedicated bike lanes on both sides of the road.

Roberts Road is a two-lane undivided, unpaved roadway and runs primarily south-north in the study area. The roadway is functionally classified by GDOT as an urban local road and does not have a posted speed limit. Roberts Road is a dead-end road that terminates north of the project site. Sidewalks are not provided along both sides of the roadway. For analysis purposes, a speed limit of 25 mph was assumed.

Thornton Road (SR 6) is a four-lane divided roadway and runs primarily south-north in the vicinity of the project site. The roadway is functionally classified by GDOT as an urban principal arterial-other and has a posted speed limit of 55 mph. Sidewalks are not provided along both sides of the roadway.

3.2 Existing Lane Geometry and Traffic Control

The existing lane geometry and traffic control for the study intersections are shown in **Figure 4**.

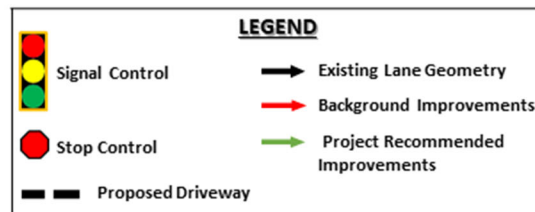
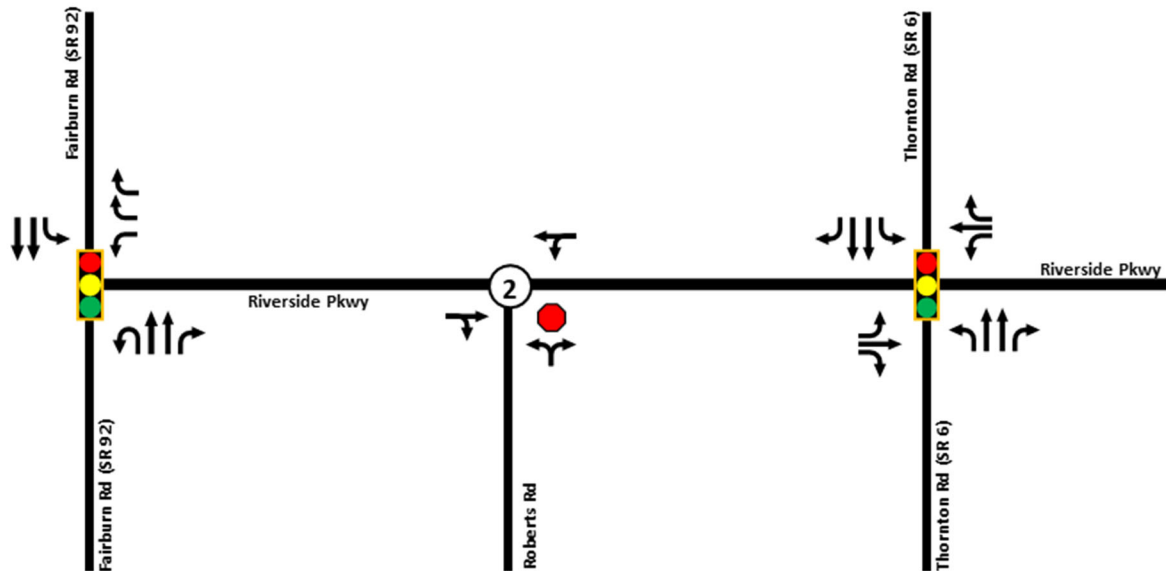


Figure 4: Existing (2023) Lane Geometry and Traffic Control

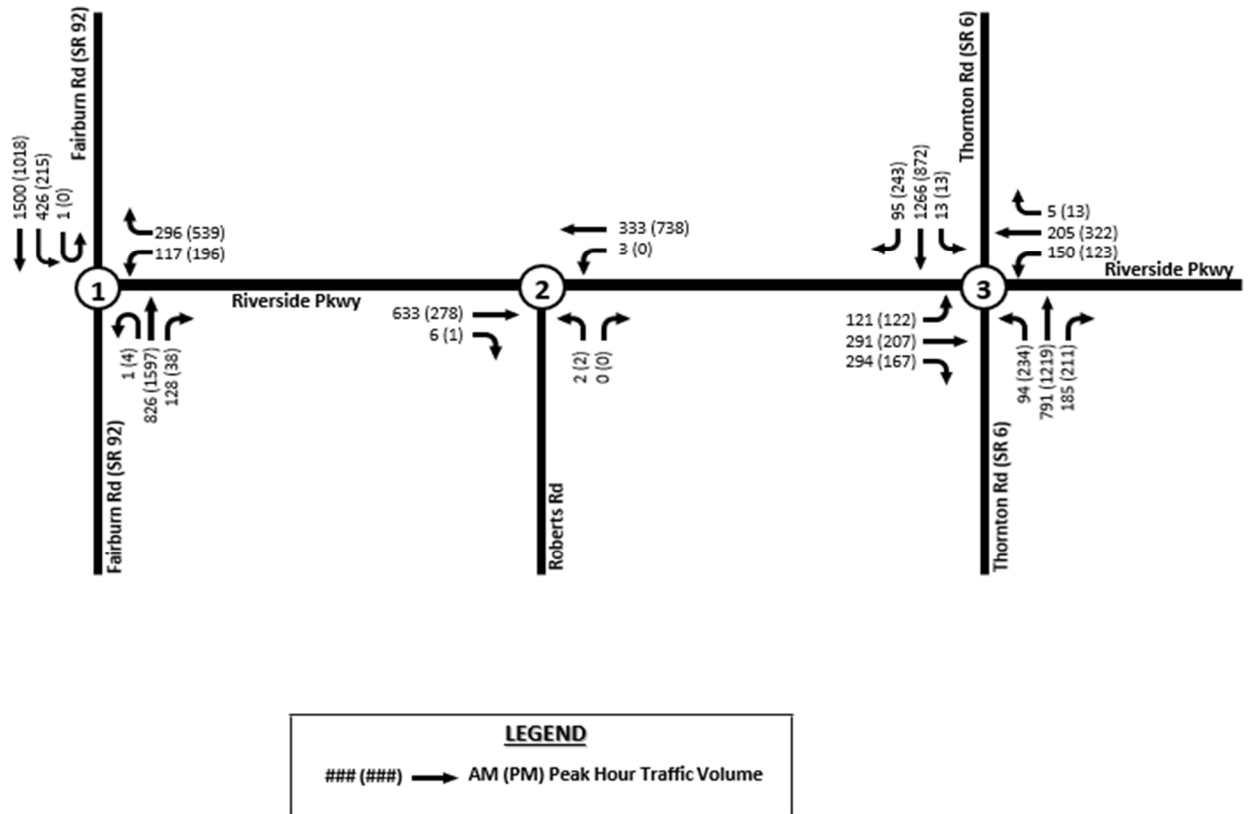


Figure 5: Existing (2023) Traffic Volumes

3.3 Traffic Data

Turning movement counts were collected while public schools were in session on Tuesday, May 23, 2023. The AM peak hour was determined to be 7:15 AM-8:15 AM and the PM peak hour to be 5:00 PM-6:00 PM. The peak hour turning movement volumes are shown graphically in **Error! Reference source not found.5**. Additional 24-hour bi-directional vehicle volume counts were collected along the site frontage Riverside Parkway. The raw traffic counts are included in **Appendix B**. The existing (2023) AM and PM peak hour vehicular turning movement volumes are displayed in **Figure 5**.

3.4 Nearby Developments and Proposed Projects

According to ARC's Transportation Improvement Program, Douglas County's Transit Master Plan, Douglas County SPLOST Program 2016-2023, and GDOT's Construction Work Program, the projects in Table 1 are programmed or planned to be completed.

Table 1: Projects in the Study Network

Roadway	PI #	Project Description
SR 166 (Fairburn Rd/ Campbellton Road	721770	Street and Bridge Widening - Old Lower River Road to SR 70
Chattahoochee Hills Greenway Trail	12877	11-mile multi-use trail from Boundary Waters Park to Old Factory Shoals Road/ Factory Shoals Road intersection

3.5 Existing Capacity Analysis

A capacity analysis for the study intersections was performed under existing (2023) conditions based on the Highway Capacity Manual 6th Edition (HCM 6), whenever applicable, during the AM and PM peak hours using Synchro 11. Existing conditions represent existing intersection geometrical layouts, existing traffic control, and existing (2023) vehicular turning movement counts during the AM and PM peak hours. Capacity analysis results, including vehicular control delay, level of service (LOS) at the movement and intersection levels, and 95th percentile queue lengths, are summarized in **Table 1**. Average vehicular delays are shown in seconds per vehicle. LOS is a grading system as defined by the HCM where A is the best, and F is the worst. Fully optimized signal timing plans were considered for analysis of signalized intersections. Detailed capacity and queue analysis reports under existing (2023) conditions can be found in **Appendix C**.

Table 2: Existing Conditions Capacity Analysis

ID	Intersection	Traffic Control	Movement	AM Peak Hour			PM Peak Hour		
				Delay (sec/veh)	LOS	95th %ile Queue (ft)	Delay (sec/veh)	LOS	95th %ile Queue (ft)
1	Fairburn Rd (SR 92) & Riverside Pkwy	Signal	WBL	89.0	F	203	89.0	F	340
			WBR	0.0	A	0	0.0	A	0
			NBT	15.4	B	240	15.4	B	520
			NBR	0.0	A	0	0.0	A	0
			SBL	32.6	C	218	32.6	C	243
			SBT	5.5	A	233	5.5	A	183
			Intersection	18.1	B	--	18.1	B	--
2	Riverside Pkwy & Roberts Rd	TWSC	EBTR	0.0	A	0	0.0	A	0
			WBLT	8.9	A	0	0.0	A	0
			NBLR	22.7	C	0	19.1	C	0
			Intersection	0.1	--	--	0.0	--	--
3	Thornton Rd (SR 6) & Riverside Pkwy	Signal	EBL	54.1	D	200	65.0	E	220
			EBT	88.3	F	533	68.6	E	360
			EBR	0.0	A	0	0.0	A	0
			WBL	102.9	F	168	55.1	E	210
			WBT	68.9	E	3625	103.0	F	643
			WBR	0.0	A	0	0.0	A	0
			NBL	68.1	E	178	67.6	E	398
			NBT	22.4	C	368	29.9	C	663
			NBR	0.0	A	0	0.0	A	0
			SBL	113.6	F	35	120.2	F	38
			SBT	55.9	E	905	58.1	E	660
			SBR	0.0	A	0	0.0	A	0
			Intersection	54.0	D	--	53.5	D	--

The worst movement delay was reported for uncontrolled approaches at unsignalized intersections

As indicated in **Table 2**, the existing (2023) capacity analysis revealed the following results:

Fairburn Road (SR 92) at Riverside Parkway

- During the AM and PM peak hours, all turning movements currently operate at LOS C or better except for the WB left turn movement which operates at **LOS F**.
- The intersection operates sufficiently at LOS B during both peak hours.

Riverside Parkway at Roberts Road

- During the AM and PM peak hours, all turning movements currently operate at LOS C or better.
- The intersection operates adequately with negligible delay during both peak hours.

Riverside Parkway at Thornton Road

- During the AM peak hour, the eastbound through, westbound left, and southbound left turn movements currently operate inadequately at **LOS F**. Additionally westbound through, northbound left and southbound through movements operate at LOS E.

- During the PM peak hour, the southbound left turn and westbound through movements currently operate inadequately at **LOS F**. Additionally, westbound left, northbound left, and southbound through movements operate at LOS E
- The remaining turn movements currently operate at LOS D or better during both peak hours.
- The intersection still operates sufficiently at an overall LOS D during both peak hours.

4 Background Conditions

4.1 Background Lane Geometry and Traffic Control

Lane geometry and traffic control under background (2025) conditions are depicted in **Figure 6**.

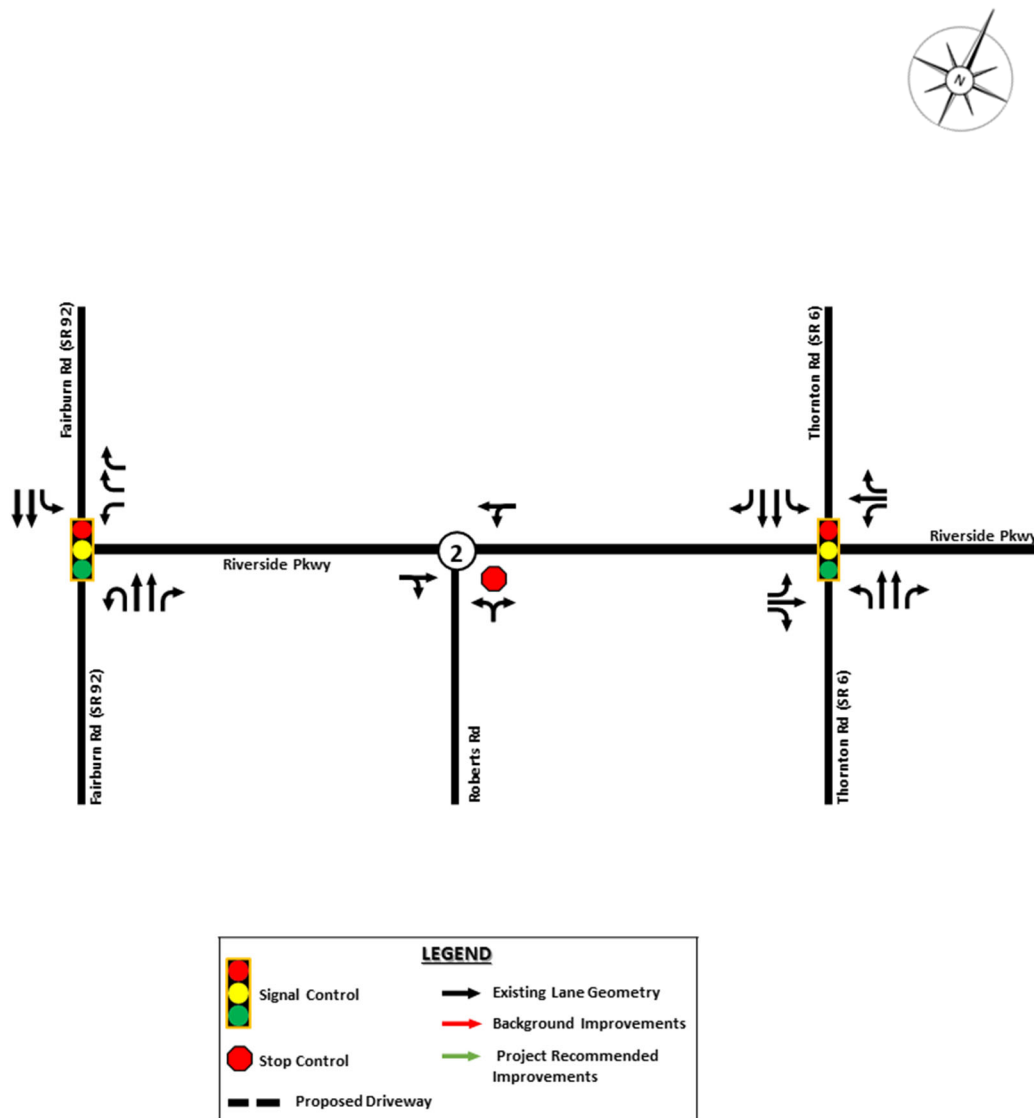


Figure 6: Background (2025) Lane Geometry and Traffic Control

4.2 Background Traffic

Background traffic growth is the analysis method of analyzing historic trends in traffic volumes / population growth, and future growth projections to determine an annual growth rate which is applied to the existing traffic counts on the study network. The background traffic growth in the study area was based on the calculated growth rate of 2.2% that was applied to the existing turning movement counts. Background traffic volumes were computed by applying the calculated growth rate to the existing (2023) turning movement volumes. Background (2025) AM and PM peak hour vehicular turning movement volumes are displayed in **Figure 7**.

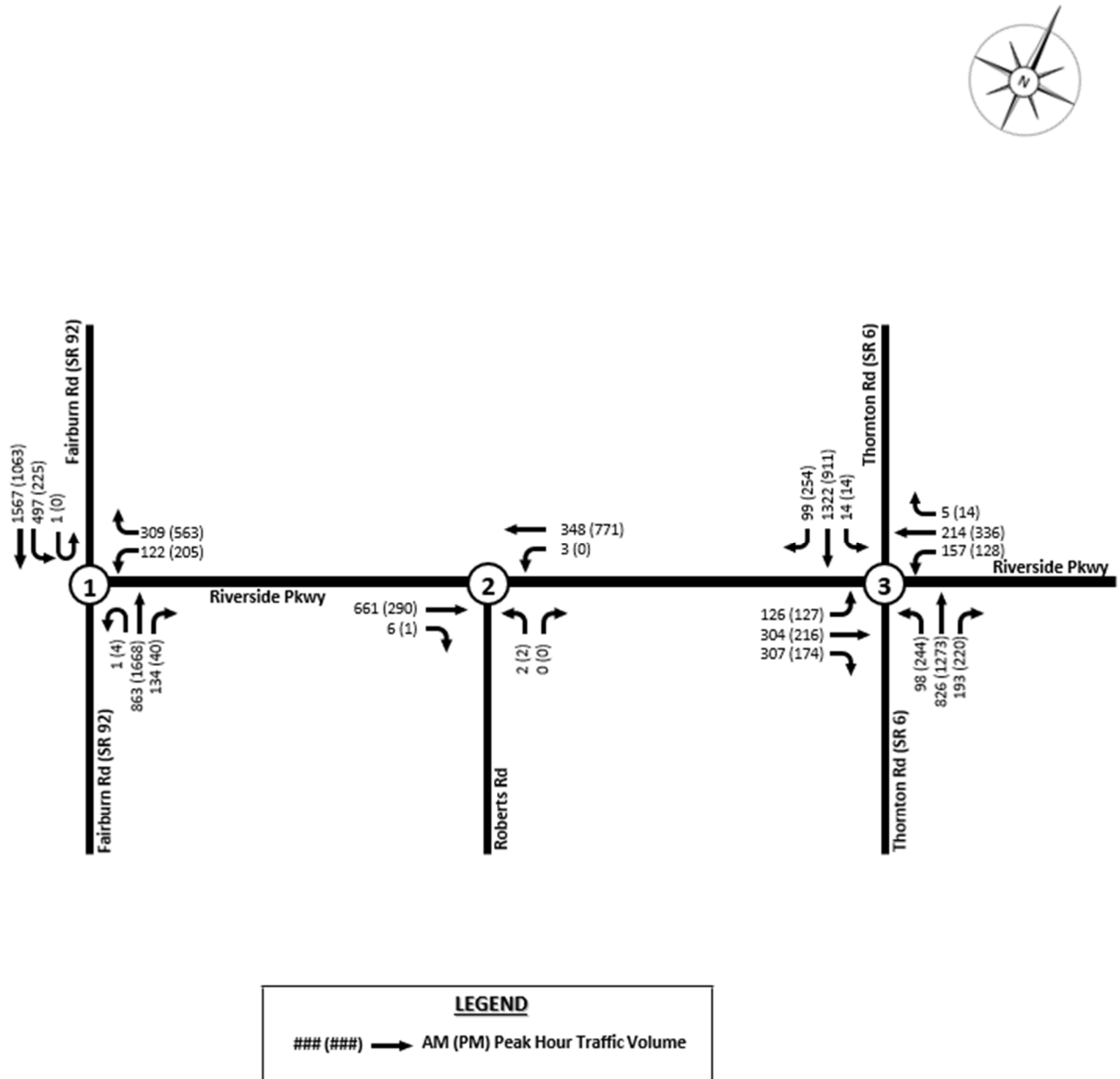


Figure 7: Background (2025) Traffic Volumes

4.3 Background Capacity Analysis

A capacity analysis for the study intersections was performed under background (2025) conditions based on the HCM 6's methodology, whenever applicable, during the AM and PM peak hours using Synchro 11. Background conditions represent future intersection geometrical layouts, future traffic control, and projected (2025) vehicular turning movement counts during the AM and PM peak hours. Capacity analysis results, including vehicular control delay, LOS at the approach and intersection levels, and 95th percentile queue lengths, are summarized in **Table 3**. Average vehicular delays are shown in seconds per vehicle. LOS is a grading system defined by the HCM where A is the best, and F is worst. Fully optimized signal timing plans were considered for analysis of signalized intersections. Detailed capacity and queue analysis reports under background (2025) conditions can be found in **Appendix D**.

Table 3: Background Conditions Capacity Analysis

ID	Intersection	Traffic Control	Movement	AM Peak Hour			PM Peak Hour		
				Delay (sec/veh)	LOS	95th %ile Queue (ft)	Delay (sec/veh)	LOS	95th %ile Queue (ft)
1	Fairburn Rd (SR 92) & Riverside Pkwy	Signal	WBL	73.2	E	210	90.3	F	355
			WBR	0.0	A	0	0.0	A	0
			NBT	12.8	B	260	18.3	B	598
			NBR	0.0	A	0	0.0	A	0
			SBL	25.5	C	410	41.9	D	250
			SBT	5.9	A	255	5.8	A	198
			Intersection	13.7	B	--	20.4	C	--
2	Riverside Pkwy & Roberts Rd	TWSC	EBTR	0.0	A	0	0.0	A	0
			WBLT	9.0	A	0	0.0	A	0
			NBLR	24.1	C	0	20.0	C	0
			Intersection	0.1	--	--	0.0	--	--
3	Thornton Rd (SR 6) & Riverside Pkwy	Signal	EBL	53.4	D	205	66.1	E	228
			EBT	89.0	F	553	68.2	E	375
			EBR	0.0	A	0	0.0	A	0
			WBL	114.2	F	203	54.3	D	215
			WBT	68.9	E	365	104.6	F	670
			WBR	0.0	A	0	0.0	A	0
			NBL	69.6	E	188	71.4	E	423
			NBT	23.6	C	393	32.4	C	723
			NBR	0.0	A	0	0.0	A	0
			SBL	113.7	F	38	120.5	F	40
			SBT	62.1	E	990	60.4	E	700
			SBR	0.0	A	0	0.0	A	0
			Intersection	57.7	E	--	55.6	E	--

The worst movement delay was reported for uncontrolled approaches at unsignalized intersections

As shown in **Table 2**, the background (2025) conditions capacity analysis revealed the following results:

Fairburn Road (SR 92) at Riverside Parkway

- During the AM and PM peak hours, all turning movements will continue to operate at LOS C or better apart for westbound left turn movement which operates at LOS E and F during the AM and PM peak hour respectively.
- The intersection will continue to operate sufficiently at an overall LOS C or better during both peak hours.

Riverside Parkway at Roberts Road

- During the AM and PM peak hours, all turning movements will continue to operate at LOS C or better.
- The intersection will continue to operate adequately with negligible delay during both peak hours.

Riverside Parkway at Thornton Road

- During the AM peak hour, the eastbound through, westbound left, and southbound left turn movements will continue to operate inadequately at **LOS F**. Additionally, the westbound through, northbound left, and southbound through movements operate at LOS E.
- During the PM peak hour, the westbound through and southbound left turn movements are projected to operate below the adopted LOS standard at **LOS F**. Additionally, the eastbound through, eastbound left, northbound left, and southbound through movements operate at LOS E.
- The remaining turn movements will continue to operate at LOS D or better during both peak hours.
- The intersection will operate insufficiently at an overall LOS E during the AM and PM peak hours.

5 Build Conditions

5.1 Trip Generation

A trip generation analysis was performed for the proposed development using the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition. The resulting trip generation analysis is summarized in **Table 4**. ITE information sheets are provided in **Appendix E**.

Table 4: Trip Generation Analysis

Land Use Information	Project Trips			Equation Used ¹	In / Out Distribution
	Total	Inbound	Outbound		
160 - Data Center				1,657,000	SF
Daily	1,640	820	820	$T = 0.99(X)$	50% / 50%
AM Peak Hour	210	116	94	$T = 0.13(X) - 5.63$	55% / 45%
PM Peak Hour	177	53	124	$T = 0.11(X) - 5.65$	30% / 70%
Net New External Vehicle Trips					
Daily	1,640	820	820		
AM Peak Hour	210	116	94		
PM Peak Hour	177	53	124		

¹ Where: T = Trips; X = Density by Variable

Source: ITE Trip Generation Manual, 11th Edition

The proposed development is anticipated to generate 1,640 net new daily vehicle trips (820 inbound and 820 outbound). The AM peak hour is anticipated to generate 210 net new vehicle trips (116 inbound and 94 outbound). The PM peak hour is anticipated to generate 177 net new vehicle trips (53 inbound and 124 outbound).

It should be noted that the trip generation is based on average trip rates and equations published in the ITE Trip Generation Manual. Typically, Vantage Data Centers generate 60 trips daily on all their data center sites. There was a discussion during the methodology meeting to collect counts at three of their sites to develop an average rate. Due to time constraints, we were unable to collect data. Hence the entire analysis is based on the ITE Trip Generation rates.

5.2 Trip Distribution

The trip distribution pattern used in the approved DRI study was maintained to accurately reflect prevailing travel patterns in the vicinity of the site and the surrounding transportation network. The estimated project trip distribution on the study intersections is presented in **Figure 8**. Project trips were then assigned to the study intersections. AM and PM peak hour project trips are displayed in **Figure 9**.

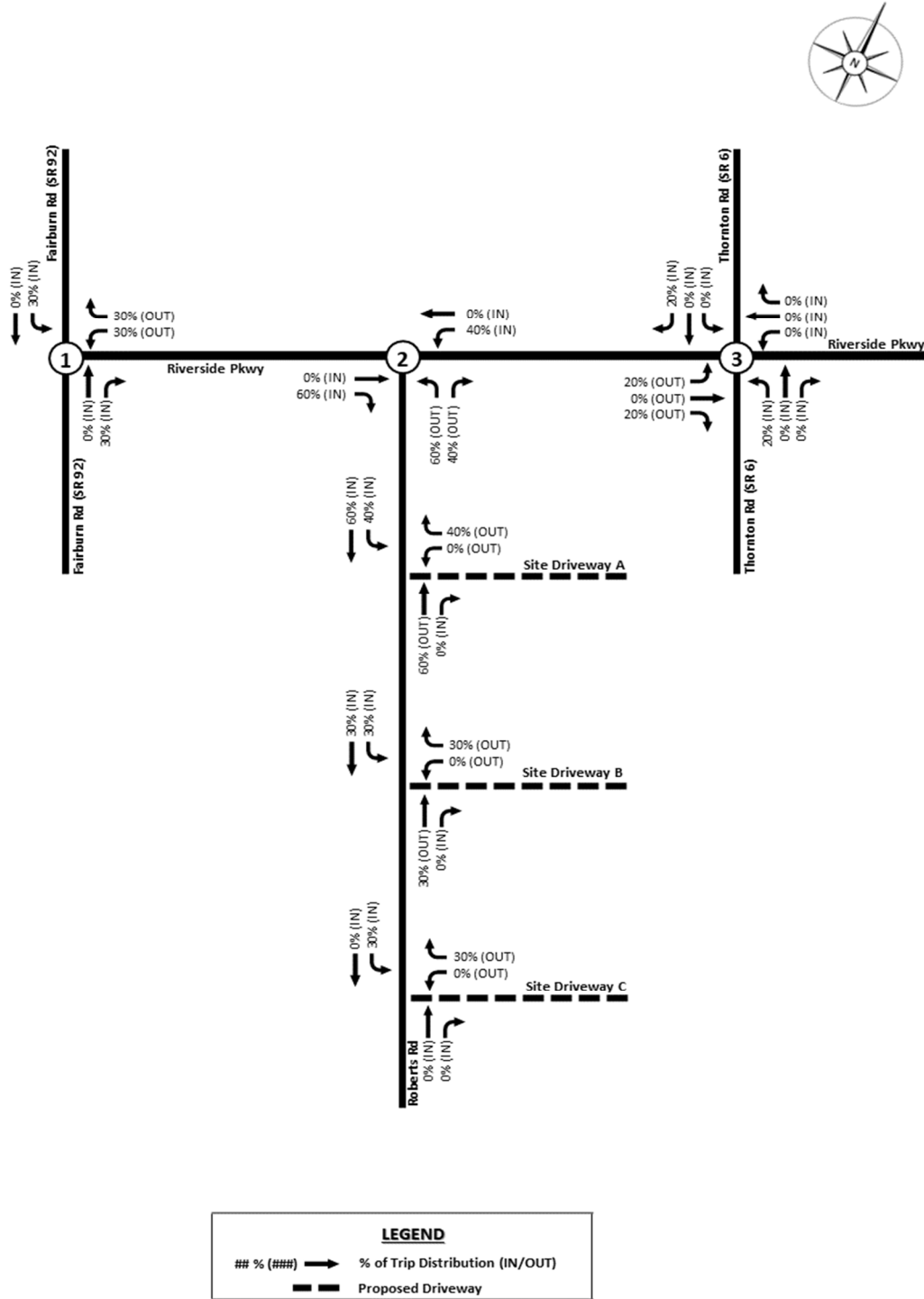


Figure 8: Project Trip Distribution

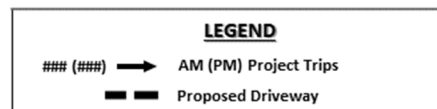
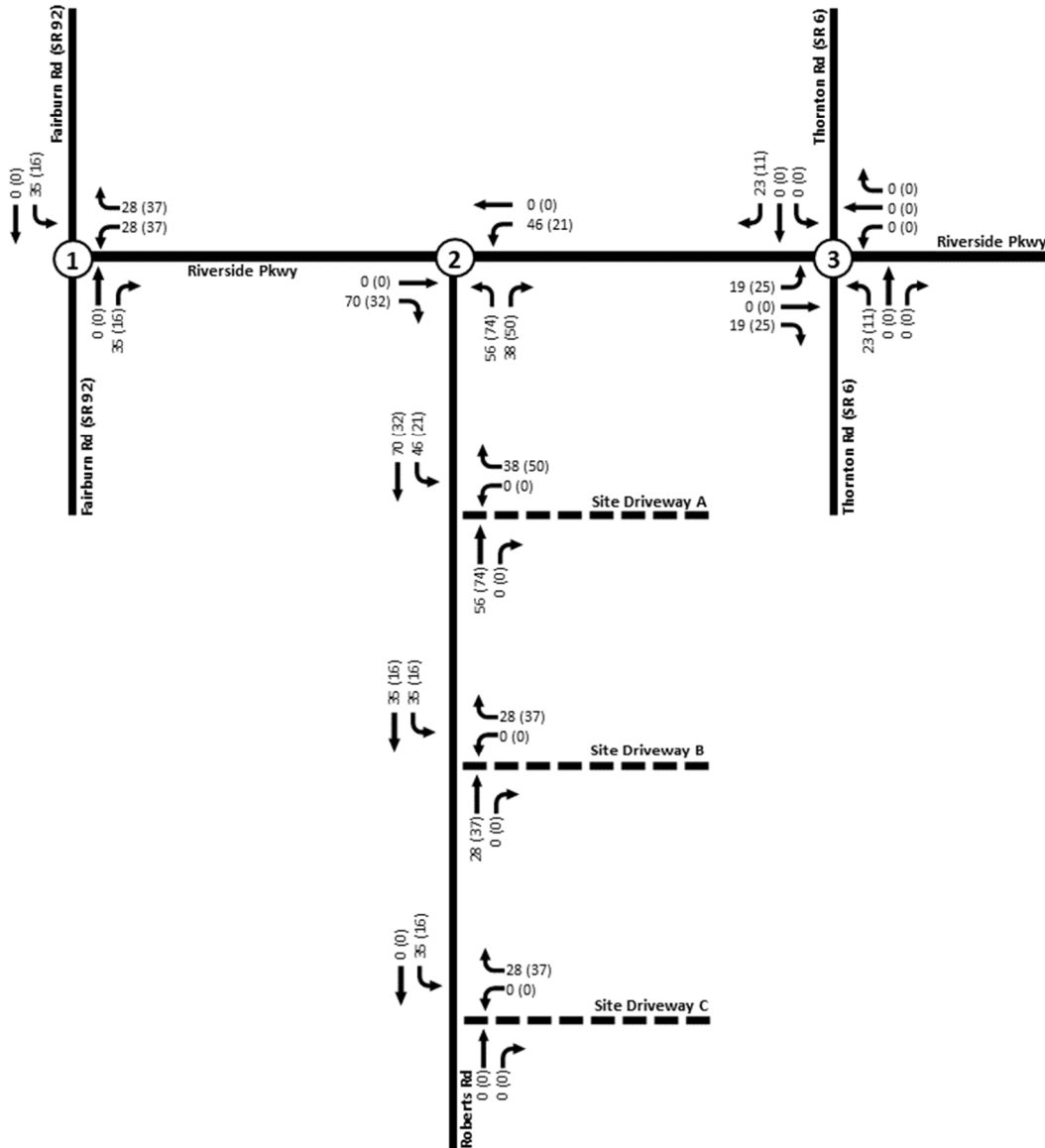


Figure 9: Assignment of Project Trips

5.3 Build Lane Geometry and Traffic Control

Lane geometry and traffic control under build (2025) conditions for the study intersections are illustrated in **Figure 10**. A right-in, right-out access to the site will be provided but will be used under emergency conditions only.

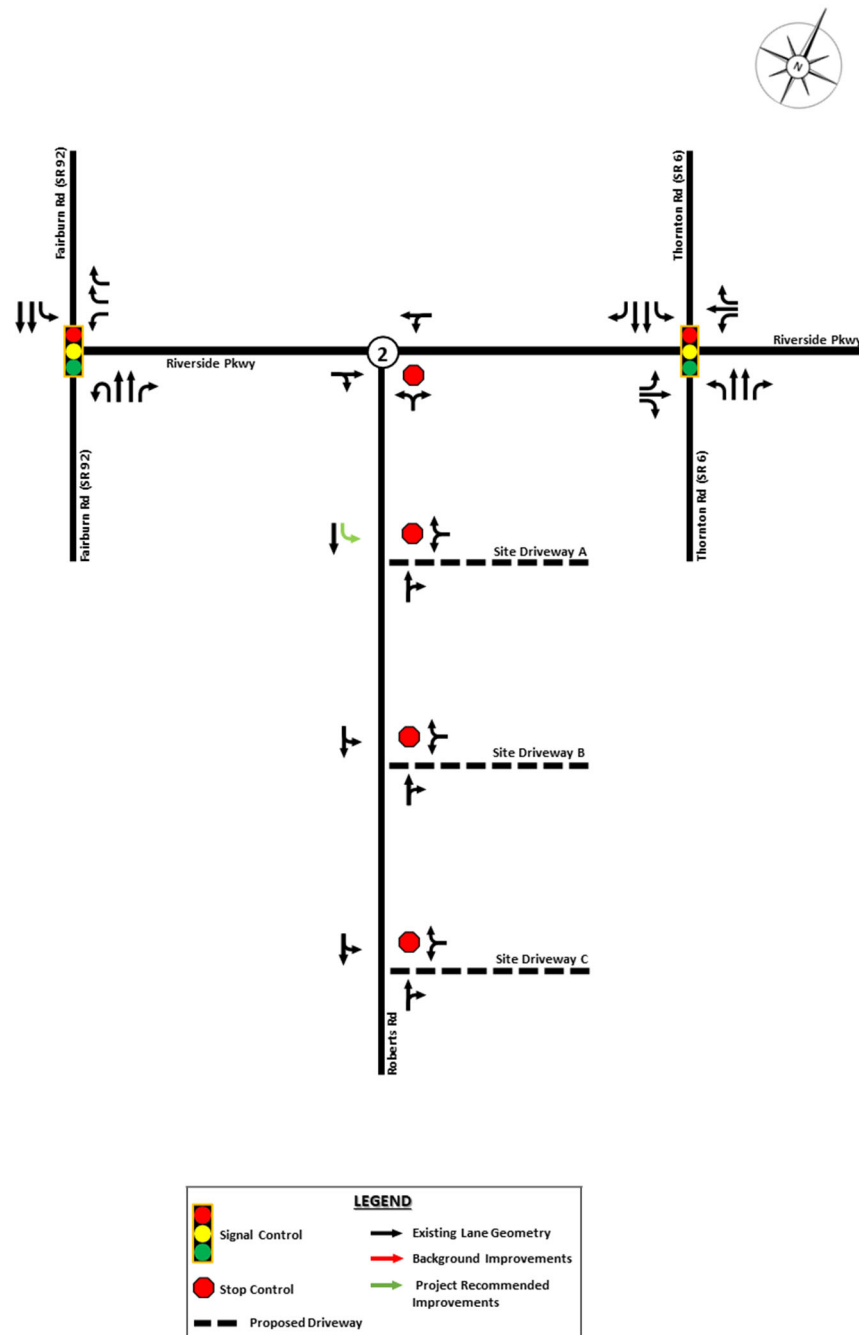


Figure 10: Build (2025) Lane Geometry and Traffic Control

5.4 Build Capacity Analysis

A capacity analysis for the study intersections was performed under build (2025) conditions based on the HCM 6's methodology, whenever applicable, during the AM and PM peak hours using Synchro 11. Build conditions represent future intersection geometrical layouts, future traffic control, and projected (2025) intersection vehicular turning movement volumes during the AM and PM peak hours. Projected (2025) intersection volumes were computed by applying the calculated annual growth rate to the existing (2023) turning movement volumes and then adding the project-generated directional trips. Projected build (2025) AM and PM peak hour vehicular turning movement volumes for the study intersections are presented in **Figure 11**.

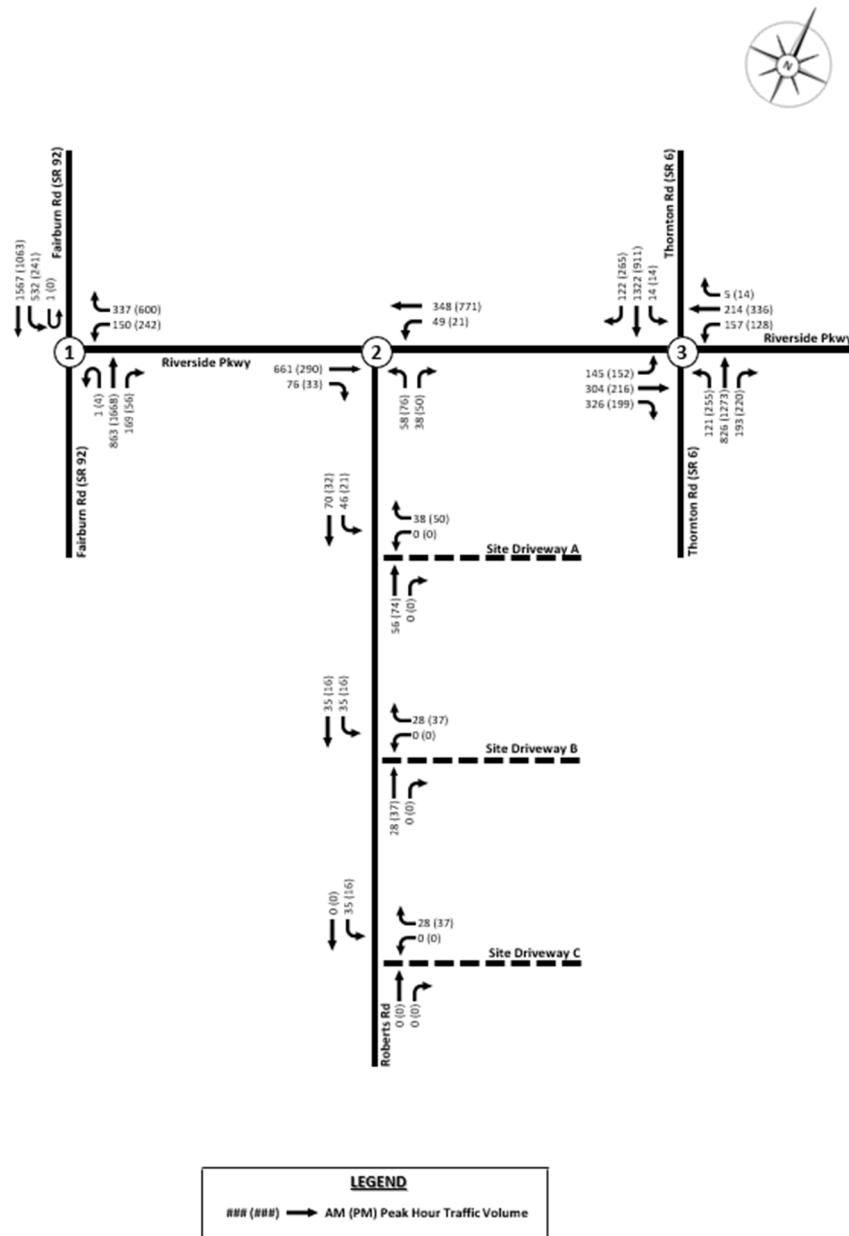


Figure 11: Build (2025) Traffic Volumes

Capacity analysis results, including vehicular control delay, LOS at the approach and intersection levels, and 95th percentile queue lengths, are summarized in **Table 4**. Average vehicular delays are shown in seconds per vehicle. LOS is a grading system defined by the HCM where A is the best, and F is worst. Fully optimized signal timing plans were considered for analysis of signalized intersections. Detailed capacity and queue analysis reports under build (2025) conditions can be found in **Appendix D**.

Table 5: Build Conditions Capacity Analysis

ID	Intersection	Traffic Control	Movement	AM Peak Hour			PM Peak Hour		
				Delay (sec/veh)	LOS	95th %ile Queue (ft)	Delay (sec/veh)	LOS	95th %ile Queue (ft)
1	Fairburn Rd (SR 92) & Riverside Pkwy	Signal	WBL	77.5	E	255	107.8	F	443
			WBR	0.0	A	0	0.0	A	0
			NBT	17.5	B	310	21.9	C	665
			NBR	0.0	A	0	0.0	A	0
			SBL	35.2	D	460	46.5	D	355
			SBT	6.9	A	293	6.4	A	213
			Intersection	18.1	B	--	25.1	C	--
2	Riverside Pkwy & Roberts Rd	TWSC	EBTR	0.0	A	0	0.0	A	0
			WBLT	9.6	A	5	8.0	A	3
			NBLR	42.9	E	68	25.6	D	50
			Intersection	3.7	--	--	2.7	--	--
3	Thornton Rd (SR 6) & Riverside Pkwy	Signal	EBL	54.2	D	230	64.8	E	260
			EBT	89.0	F	553	74.1	E	378
			EBR	0.0	A	0	0.0	A	0
			WBL	114.9	F	203	64.2	E	228
			WBT	72.4	E	375	258.7	F	938
			WBR	0.0	A	0	0.0	A	0
			NBL	116.2	F	285	421.8	F	868
			NBT	23.6	C	393	26.4	C	628
			NBR	0.0	A	0	0.0	A	0
			SBL	113.7	F	38	113.7	F	38
			SBT	44.8	D	855	30.3	C	488
			SBR	0.0	A	0	0.0	A	0
			Intersection	52.5	D	--	88.6	F	--
4	Roberts Rd & Site Driveway A	TWSC	WBLR	8.7	A	3	8.9	A	5
			NBTR	0.0	A	0	0.0	A	0
			SBL	7.4	A	3	7.4	A	0
			SBT	0.0	A	0	0.0	A	0
			Intersection	3.2	--	--	3.4	--	--
5	Roberts Rd & Site Driveway B	TWSC	WBLR	8.6	A	3	8.6	A	3
			NBTR	0.0	A	0	0.0	A	0
			SBLT	7.3	A	3	7.3	A	0
			Intersection	4.0	--	--	4.1	--	--
6	Roberts Rd & Site Driveway C	TWSC	WBLR	0.0	A	0	0.0	A	0
			NBTR	0.0	A	0	0.0	A	0
			SBLT	0.0	A	0	0.0	A	0
			Intersection	0.0	--	--	0.0	--	--

The worst movement delay was reported for uncontrolled approaches at unsignalized intersections

As indicated in **Table 5**, the build (2024) conditions capacity analysis for revealed the following results:

Fairburn Road (SR 92) at Riverside Parkway

- During the AM and PM peak hours, all turning movements will operate at LOS D or better.
- The intersection will operate sufficiently at an overall LOS B during both peak hours.

Riverside Parkway at Roberts Road

- During the AM peak hour, the northbound turn movements are projected to operate at LOS E. The remaining turning movements are projected to operate at LOS D or better during both peak hours at the project buildout.
- The intersection will continue to operate adequately with negligible delay during both peak hours.

Riverside Parkway at Thornton Road

- During the AM peak hour, the eastbound through, westbound left, and northbound and southbound left turn movements will continue to operate inadequately at **LOS F**. Also, the westbound through movement is projected to operate below the adopted LOS standard at LOS E.
- During the PM peak hour, the westbound through, northbound and southbound left turn movements are projected to operate below the adopted LOS standard at **LOS F**.
- During the PM peak hour, the eastbound left, eastbound through, and westbound left turn movement will operate below the adopted LOS standard at LOS E.
- The remaining turn movements will continue to operate at LOS D or better during both peak hours.
- The intersection will continue to operate at an overall LOS D during the AM peak hour. During the PM peak hour, however, the intersection will operate adequately at **LOS F**.

Roberts Road at Site Driveway A

- During the AM and PM peak hours, all turning movements will operate at LOS A.
- The intersection will operate sufficiently with negligible delay during both peak hours.

Roberts Road at Site Driveway B

- During the AM and PM peak hours, all turning movements will operate at LOS A.
- The intersection will operate adequately with negligible delay during both peak hours.

Roberts Road at Site Driveway C

- During the AM and PM peak hours, all turning movements will operate at LOS A.
- The intersection will operate adequately with negligible delay during both peak hours.

5.5 Turn Lane Warrant Analysis

The development is proposed to be accessed via three (3) full access driveways on Roberts Road. The latter is a two-lane undivided, unpaved roadway with an average daily traffic (ADT) volume of 74 vehicles that leads to a water treatment plant and does not have a posted speed limit. A review of warrants for turn lanes was conducted on the proposed site access driveways in accordance with 2023 GDOT Regulations for Driveway and Encroachment Control to ensure smooth traffic flow, maintain capacity, and eliminate unnecessary delay to through traffic on Roberts Road during peak hours. If warranted, the

required total turn lane lengths will be calculated per Table 4-8 and Table 4-9 of 2023 GDOT Regulations for Driveway and Encroachment Control. A summary of turn lane warrant analysis for the proposed site access driveways is presented in **Table 6**. An excerpt from 2023 GDOT Regulations for Driveway and Encroachment Control is provided in **Appendix F**.

Table 6: Turn Lane Warrant Analysis

Location	Warrant For	# of Lanes	Speed Limit (mph)	AADT Category	Project RT/LT Volume (vpd)	Volume Threshold (vpd)	Warrant Met ?
Roberts Rd @ Site Driveway A	Right Turn Lane	2	35 MPH or Less	<6,000	0	200	No
Roberts Rd @ Site Driveway B	Right Turn Lane	2	35 MPH or Less	<6,000	0	200	No
Roberts Rd @ Site Driveway C	Right Turn Lane	2	35 MPH or Less	<6,000	0	200	No
Roberts Rd @ Site Driveway A	Left Turn Lane	2	35 MPH or Less	<6,000	328	300	Yes
Roberts Rd @ Site Driveway B	Left Turn Lane	2	35 MPH or Less	<6,000	246	300	No
Roberts Rd @ Site Driveway C	Left Turn Lane	2	35 MPH or Less	<6,000	246	300	No

5.5.1 Auxiliary Right Turn Lanes

The warrant analysis result shows that a northbound right turn lane is not warranted on Roberts Road at each of the three site driveways. For the eastbound right turning movement at the intersection of Riverside Parkway and Roberts Road a right turn lane is warranted. This right turn lane should be built to have a full width storage of 175 feet with a 100 feet taper. A westbound left turn lane is also warranted. This left turn lane should be built to have a full width storage of 235 feet with a 100 feet taper.

5.5.2 Auxiliary Left Turn Lanes

The warrant analysis result shows that a southbound left turn lane is warranted on Roberts Road at Site Driveway A. Based on an assumed posted speed limit of 25 mph, therefore, a southbound left turn deceleration lane of 85 feet with a 50-foot taper should be constructed on Roberts Road at Site Driveway A. Southbound left turn lanes are not warranted on Roberts Road at Site Driveway B and C.

5.5.3 Auxiliary Turn Lanes Summary

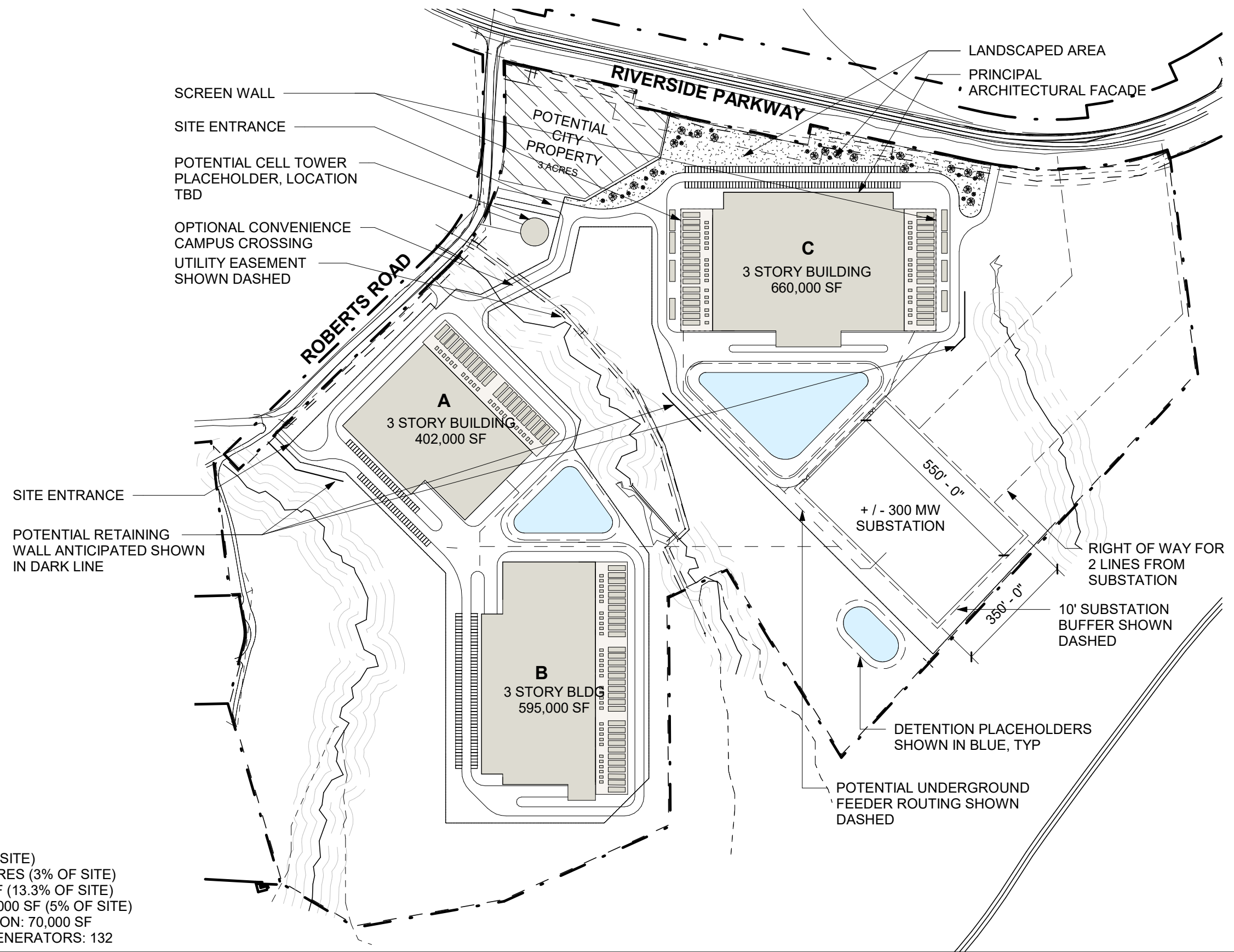
Roberts Road should be improved by installing a single southbound left turn lane of 85 feet with a 50-foot taper at Site Driveway A.

6 Conclusions and Recommendations

This DRI report was prepared to assess the impact of the proposed development of Vantage Date Center on the adjacent transportation network. The project site is located in the southeast quadrant of Riverside Parkway and Roberts Road in the City of Douglasville in Douglas County, GA. The project is composed of three three-story data center buildings totaling an area of 1,657,000 square feet with an anticipated buildout year of 2025. The analysis evaluated the development's impact on the study intersections within the project's influence area. The results of the analysis as documented herein are summarized below:

- Using the proposed development's square footage and the latest industry standard for trip generation, namely the ITE Trip Generation Manual 11th Edition, the proposed development is projected to generate 1,640 net new daily vehicle trips, of which 210 trips occur during the AM peak hour and 177 trips occur during the PM peak hour. This reference, however, estimates trips based on survey data for a particular lane use. It has been clearly observed that other data centers, owned and operated by the same development company across the U.S., generate much less trips as compared to estimates developed by the ITE Trip Generation Manual. More specific to Vantage Data Centers around the country, it has been observed that the data centers do not generate more than 60 vehicular trips per day. Due to shortage of time, an average trip rate for this site based on three other Vantage Data Centers was not possible. These data centers only expect employee trips. But the report details out analysis based on the ITE Trip Generation Manual prescribed rates.
- Except for the intersection of Thornton Road (SR 6) and Riverside Parkway, the study intersections are projected to operate at an adequate overall LOS at the project buildout.
- The intersection capacity analysis shows that the intersection of Thornton Road (SR 6) and Riverside under background conditions will operate at an overall LOS E during both peaks with a few turning movements operating at LOS F. The intersection is expected to operate at LOS F during the PM peak under build conditions. Similar to the existing and background conditions, certain individual turning movements are expected to operate at LOS F during the build conditions.
- The proposed three site access driveways are projected to operate at an adequate LOS at the project buildout.
- Based on the results of the traffic analysis, there is less than significant transportation impact due to the proposed project with minimal change to existing traffic patterns at the nearest significant intersections from the site access driveways.
- Roberts Road should be improved by installing a single southbound left turn lane of 85 feet with a 50-foot taper at Site Driveway A.
- An eastbound right turn lane should be built at the intersection of Riverside Parkway and Roberts Road to have a full width storage of 175 feet with a 100 feet taper. A westbound left turn lane is also warranted. This left turn lane should be built to have a full width storage of 235 feet with a 100 feet taper.

Appendix A: Preliminary Site Plan



SITE PLAN INFORMATION:

LOT SIZE: 95.121 ACRES
ZONING TYPE: LIGHT INDUSTRIAL
SUBSTATION: 4.4 ACRES (4.6% OF SITE)
POTENTIAL CITY PROPERTY: 3 ACRES (3% OF SITE)
BUILDING FOOTPRINTS: 552,000 SF (13.3% OF SITE)
SERVICE YARD FOOTPRINTS: 210,000 SF (5% OF SITE)
PRELIMINARY REQUIRED DETENTION: 70,000 SF
NUMBER OF PLANNED BACKUP GENERATORS: 132

GA-B CONCEPTUAL SITE PLAN

1" = 300'-0"



Appendix B: Raw Traffic Data



[Click here for Map](#)

Peak Hour Turning Movement Count

Douglasville, GA



www.marrtraffic.com

Tuesday, May 23, 2023	
Period	0600 - 0900
Peak Hour	0715 - 0815

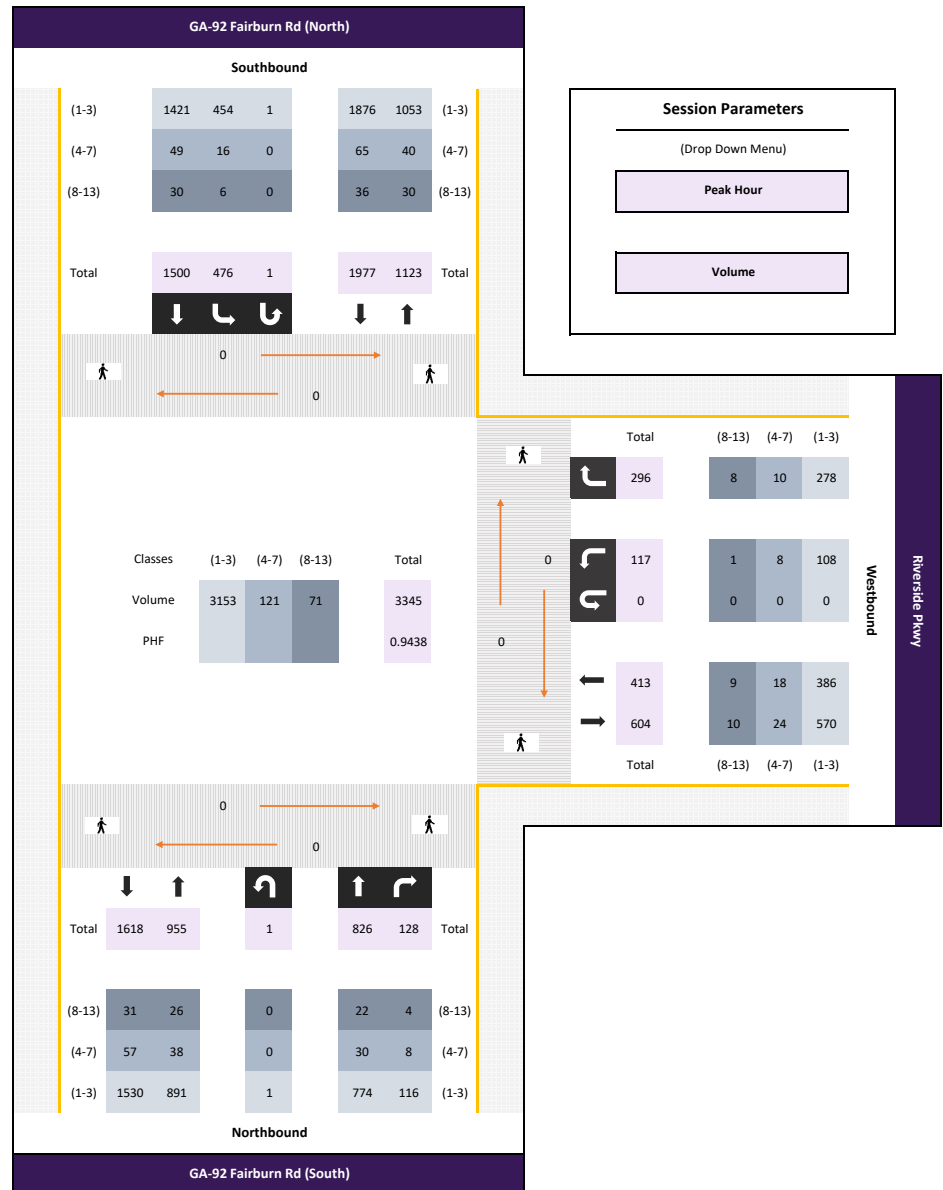
* the Peak Hour Diagram does not include Bikes

Session Parameters

(Drop Down Menu)

Peak Hour

Volume



Time	Northbound					Southbound					Westbound					Int Total					
	GA-92 Fairburn Rd (South)					GA-92 Fairburn Rd (North)					Riverside Pkwy										
	Thru 1.1	Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5	U-Turn 1.6	App Total				App Total	Left 1.7		Right 1.8		U-Turn 1.9	App Total			
0715 - 0730	-	186	46	0	232	139	287	-	0	426	-	-	-	-	0	15	-	63	0	78	736
0730 - 0745	-	204	37	0	241	132	361	-	0	493	-	-	-	-	0	31	-	102	0	133	867
0745 - 0800	-	208	22	0	230	103	420	-	0	523	-	-	-	-	0	28	-	75	0	103	856
0800 - 0815	-	228	23	1	252	102	432	-	1	535	-	-	-	-	0	43	-	56	0	99	886
Total	0	826	128	1	955	476	1500	0	1	1977	0	0	0	0	0	117	0	296	0	413	3345
Approach %	0.00	86.49	13.40	0.10	-	24.08	75.87	0.00	0.05	-	0.00	0.00	0.00	0.00	-	28.33	0.00	71.67	0.00	-	
PHF	0.00	0.91	0.70	0.25	0.95	0.86	0.87	0.00	0.25	0.92	0.00	0.00	0.00	0.00	0.00	0.68	0.00	0.73	0.00	0.78	0.94

Time	Northbound					Southbound					Westbound					Int Total					
	GA-92 Fairburn Rd (South)					GA-92 Fairburn Rd (North)					Riverside Pkwy										
	Thru 1.1	Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5	U-Turn 1.6	App Total				App Total	Left 1.7	Right 1.8	U-Turn 1.9		App Total				
0715 - 0730	-	181	43	0	224	133	273	-	0	406	-	-	-	-	0	13	-	58	0	71	701
0730 - 0745	-	191	33	0	224	127	338	-	0	465	-	-	-	-	0	28	-	96	0	124	813
0745 - 0800	-	189	20	0	209	97	396	-	0	493	-	-	-	-	0	24	-	71	0	95	797
0800 - 0815	-	213	20	1	234	97	414	-	1	512	-	-	-	-	0	43	-	53	0	96	842
Total	0.0	774	116	1	891	454	1421	0	1	1876	0	0	0	0	0	108	0	278	0	386	3153
Approach %	0.00	86.87	13.02	0.11	-	24.20	75.75	0.00	0.05	-	0.00	0.00	0.00	0.00	-	27.98	0.00	72.02	0.00	-	
PHF	0.00	0.91	0.67	0.25	0.95	0.85	0.86	0.00	0.25	0.92	0.00	0.00	0.00	0.00	0.00	0.63	0.00	0.72	0.00	0.78	0.94

Time	Northbound					Southbound										Westbound					Int Total
	GA-92 Fairburn Rd (South)					GA-92 Fairburn Rd (North)					Riverside Pkwy										
	Thru 1.1	Right 1.2	U-Turn 1.3	App Total		Left 1.4	Thru 1.5	U-Turn 1.6	App Total				App Total	Left 1.7	Right 1.8	U-Turn 1.9	App Total				
0715 - 0730	-	3	2	0	5	4	7	-	0	11	-	-	-	-	0	2	-	3	0	5	21
0730 - 0745	-	6	3	0	9	3	17	-	0	20	-	-	-	-	0	3	-	3	0	6	35
0745 - 0800	-	13	1	0	14	5	14	-	0	19	-	-	-	-	0	3	-	2	0	5	38
0800 - 0815	-	8	2	0	10	4	11	-	0	15	-	-	-	-	0	0	-	2	0	2	27
Total	0	30	8	0	38	16	49	0	0	65	0	0	0	0	0	8	0	10	0	18	121
Approach %	0.00	78.95	21.05	0.00	-	24.62	75.38	0.00	0.00	-	0.00	0.00	0.00	0.00	-	44.44	0.00	55.56	0.00	-	
PHF	0.00	0.58	0.67	0.00	0.68	0.80	0.72	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.83	0.00	0.75	0.80

	Northbound					Southbound					Westbound											
	GA-92 Fairburn Rd (South)					GA-92 Fairburn Rd (North)					Riverside Pkwy											
Time	Thru 1.1	Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5	U-Turn 1.6	App Total					App Total	Left 1.7		Right 1.8	U-Turn 1.9	App Total	Int Total			
0715 - 0730	-	2	1	0	3	2	7	-	0	9	-	-	-	-	0	0	-	2	0	2	14	
0730 - 0745	-	7	1	0	8	2	6	-	0	8	-	-	-	-	0	0	-	3	0	3	19	
0745 - 0800	-	6	1	0	7	1	10	-	0	11	-	-	-	-	0	1	-	2	0	3	21	
0800 - 0815	-	7	1	1	0	8	1	7	-	0	8	-	-	-	-	0	0	-	1	0	1	17
Total	0	22	4	0	26	6	30	0	0	36	0	0	0	0	0	1	0	8	0	9	71	
Approach %	0.00	84.62	15.38	0.00	-	16.67	83.33	0.00	0.00	-	0.00	0.00	0.00	0.00	-	11.11	0.00	88.89	0.00	-		
PHF	0.00	0.79	1.00	0.00	0.81	0.75	0.75	0.00	0.00	0.82	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.67	0.00	0.75	0.85	

[illegible]



[Click here for Map](#)

Peak Hour Turning Movement Count

Douglasville, GA



www.marrtraffic.com

Tuesday, May 23, 2023	
Period	1600 - 1900
Peak Hour	1645 - 1745

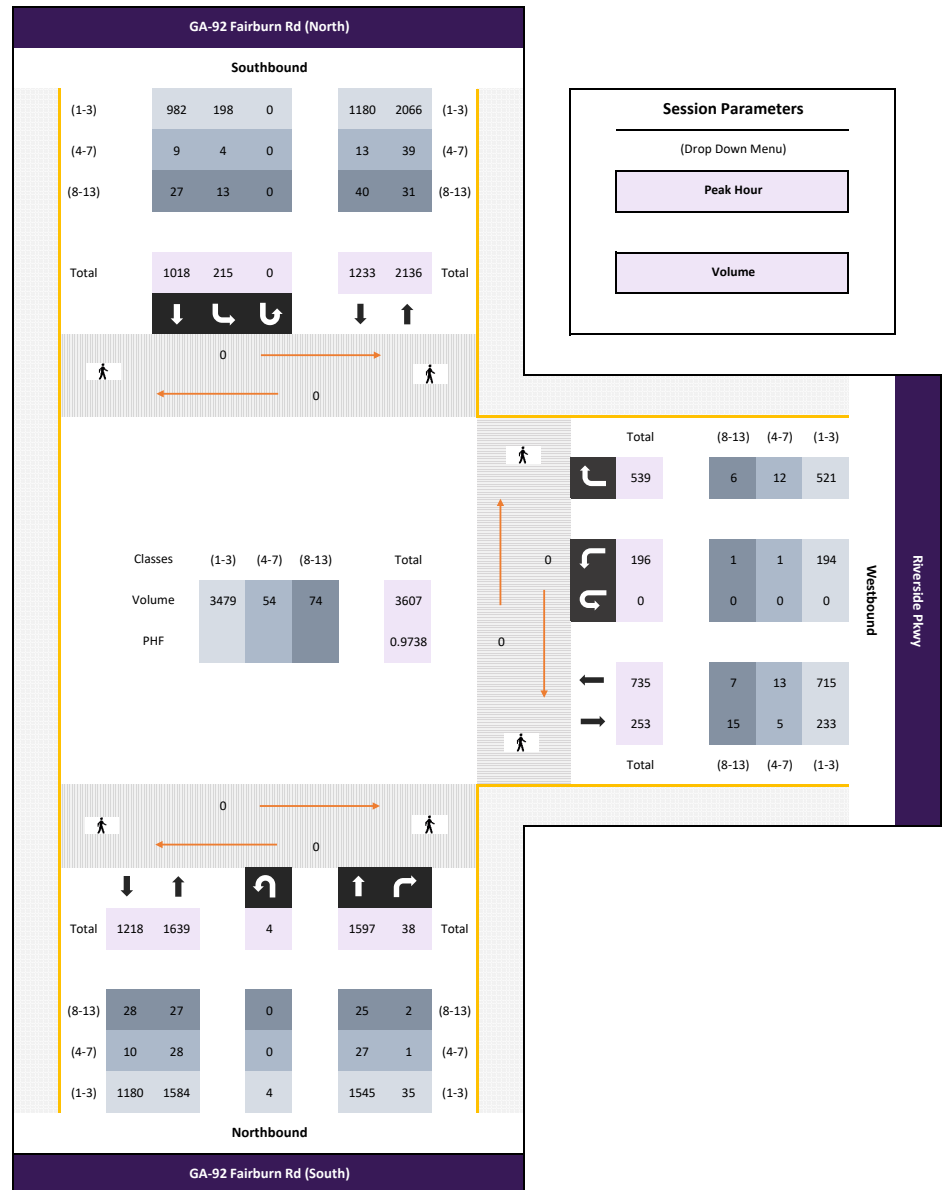
* the Peak Hour Diagram does not include Bikes

Session Parameters

(Drop Down Menu)

Peak Hour

Volume



Time	Northbound					Southbound					Westbound										
	GA-92 Fairburn Rd (South)					GA-92 Fairburn Rd (North)					Riverside Pkwy										
		Thru 1.1	Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5	U-Turn 1.6	App Total				App Total	Left 1.7		Right 1.8	U-Turn 1.9	App Total	Int Total		
1645 - 1700	-	382	13	1	396	55	251	-	0	306	-	-	-	-	0	45	-	134	0	179	881
1700 - 1715	-	405	10	0	415	51	233	-	0	284	-	-	-	-	0	33	-	150	0	183	882
1715 - 1730	-	412	8	2	422	48	253	-	0	301	-	-	-	-	0	58	-	145	0	203	926
1730 - 1745	-	398	7	1	406	61	281	-	0	342	-	-	-	-	0	60	-	110	0	170	918
Total	0	1597	38	4	1639	215	1018	0	0	1233	0	0	0	0	0	196	0	539	0	735	3607
Approach %	0.00	97.44	2.32	0.24	-	17.44	82.56	0.00	0.00	-	0.00	0.00	0.00	0.00	-	26.67	0.00	73.33	0.00	-	
PHF	0.00	0.97	0.73	0.50	0.97	0.88	0.91	0.00	0.00	0.90	0.00	0.00	0.00	0.00	0.00	0.82	0.00	0.90	0.00	0.91	0.97

Time	Northbound					Southbound					Westbound					Int Total					
	GA-92 Fairburn Rd (South)					GA-92 Fairburn Rd (North)					Riverside Pkwy										
	Thru 1.1	Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5	U-Turn 1.6	App Total				App Total	Left 1.7	Right 1.8	U-Turn 1.9		App Total				
1645 - 1700	-	366	11	1	378	50	235	-	0	285	-	-	-	-	0	45	-	130	0	175	838
1700 - 1715	-	388	10	0	398	47	227	-	0	274	-	-	-	-	0	32	-	144	0	176	848
1715 - 1730	-	403	8	2	413	43	245	-	0	288	-	-	-	-	0	58	-	141	0	199	900
1730 - 1745	-	388	6	1	395	58	275	-	0	333	-	-	-	-	0	59	-	106	0	165	893
Total	0	1545	35	4	1584	198	982	0	0	1180	0	0	0	0	0	194	0	521	0	715	3479
Approach %	0.00	97.54	2.21	0.25	-	16.78	83.22	0.00	0.00	-	0.00	0.00	0.00	0.00	-	27.13	0.00	72.87	0.00	-	
PHF	0.00	0.96	0.80	0.50	0.96	0.85	0.89	0.00	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.82	0.00	0.90	0.00	0.90	0.97

Time	Northbound					Southbound										Westbound					Int Total
	GA-92 Fairburn Rd (South)					GA-92 Fairburn Rd (North)					Riverside Pkwy										
	Thru 1.1	Right 1.2	U-Turn 1.3	App Total		Left 1.4	Thru 1.5	U-Turn 1.6	App Total				App Total	Left 1.7	Right 1.8	U-Turn 1.9	App Total				
1645 - 1700	-	7	1	0	8	1	1	-	0	2	-	-	-	-	0	0	-	3	0	3	13
1700 - 1715	-	8	0	0	8	1	2	-	0	3	-	-	-	-	0	1	-	4	0	5	16
1715 - 1730	-	4	0	0	4	1	5	-	0	6	-	-	-	-	0	0	-	2	0	2	12
1730 - 1745	-	8	0	0	8	1	1	-	0	2	-	-	-	-	0	0	-	3	0	3	13
Total	0	27	1	0	28	4	9	0	0	13	0	0	0	0	0	1	0	12	0	13	54
Approach %	0.00	96.43	3.57	0.00	-	30.77	69.23	0.00	0.00	-	0.00	0.00	0.00	0.00	-	7.69	0.00	92.31	0.00	-	
PHF	0.00	0.84	0.25	0.00	0.88	1.00	0.45	0.00	0.00	0.54	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.75	0.00	0.65	0.84

	Northbound					Southbound					Westbound											
	GA-92 Fairburn Rd (South)					GA-92 Fairburn Rd (North)					Riverside Pkwy											
Time	Thru 1.1	Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5	U-Turn 1.6	App Total					App Total	Left 1.7		Right 1.8	U-Turn 1.9	App Total	Int Total			
1645 - 1700	-	9	1	0	10	4	15	-	0	19	-	-	-	-	0	0	-	1	0	1	30	
1700 - 1715	-	9	0	0	9	3	4	-	0	7	-	-	-	-	0	0	-	2	0	2	18	
1715 - 1730	-	5	0	0	5	4	3	-	0	7	-	-	-	-	0	0	-	2	0	2	14	
1730 - 1745	-	2	1	1	0	3	2	5	-	0	7	-	-	-	-	0	1	-	1	0	2	12
Total	0	25	2	0	27	13	27	0	0	40	0	0	0	0	0	1	0	6	0	7	74	
Approach %	0.00	92.59	7.41	0.00	-	32.50	67.50	0.00	0.00	-	0.00	0.00	0.00	0.00	-	14.29	0.00	85.71	0.00	-		
PHF	0.00	0.69	0.50	0.00	0.68	0.81	0.45	0.00	0.00	0.53	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.75	0.00	0.88	0.62	

	Northbound					Southbound						Westbound							
	GA-92 Fairburn Rd (South)					GA-92 Fairburn Rd (North)						Riverside Pkwy							
Time		Thru 1.1	Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5	U-Turn 1.6	App Total					App Total	Left 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
1645 - 1700	-	0	0	0	0	0	0	-	0	0	-	-	-	0	0	-	0	0	0
1700 - 1715	-	0	0	0	0	0	0	-	0	0	-	-	-	0	0	-	0	0	0
1715 - 1730	-	0	0	0	0	0	0	-	0	0	-	-	-	0	0	-	0	0	0
1730 - 1745	-	0	0	0	0	0	0	-	0	0	-	-	-	0	0	-	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Classified Turn Movement Count || All vehicles

Douglasville, GA



Site 1 of 3

GA-92 Fairburn Rd (South)
GA-92 Fairburn Rd (North)

Riverside Pkwy

Date

Tuesday, May 23, 2023

Lat/Long

33.707188°, -84.660750°

Weather

Cloudy
67°F

0600 - 0900 (Weekday 3h Session) (05-23-2023)

All vehicles

TIME	Northbound				Southbound				Westbound				
	GA-92 Fairburn Rd (South)				GA-92 Fairburn Rd (North)				Riverside Pkwy				
	Thru 1.1	Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5	U-Turn 1.6	App Total	Left 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
0600 - 0615	86	22	0	108	64	175	0	239	15	20	0	35	382
0615 - 0630	101	19	0	120	86	263	0	349	15	22	0	37	506
0630 - 0645	129	31	0	160	117	332	0	449	9	32	0	41	650
0645 - 0700	130	43	0	173	133	298	0	431	14	37	0	51	655
Hourly Total	446	115	0	561	400	1068	0	1468	53	111	0	164	2193
0700 - 0715	154	44	0	198	138	215	0	353	10	55	0	65	616
0715 - 0730	186	46	0	232	139	287	0	426	15	63	0	78	736
0730 - 0745	204	37	0	241	132	361	0	493	31	102	0	133	867
0745 - 0800	208	22	0	230	103	420	0	523	28	75	0	103	856
Hourly Total	752	149	0	901	512	1283	0	1795	84	295	0	379	3075
0800 - 0815	228	23	1	252	102	432	1	535	43	56	0	99	886
0815 - 0830	221	31	0	252	85	305	0	390	28	56	0	84	726
0830 - 0845	251	35	0	286	89	279	0	368	10	52	0	62	716
0845 - 0900	168	20	1	189	68	217	0	285	11	48	0	59	533
Hourly Total	868	109	2	979	344	1233	1	1578	92	212	0	304	2861
Grand Total	2066	373	2	2441	1256	3584	1	4841	229	618	0	847	8129
Approach %	84.64	15.28	0.08	-	25.95	74.03	0.02	-	27.04	72.96	0.00	-	-
Intersection %	25.42	4.59	0.02	30.03	15.45	44.09	0.01	59.55	2.82	7.60	0.00	10.42	-
PHF	0.91	0.70	0.25	0.95	0.86	0.87	0.25	0.92	0.68	0.73	0.00	0.78	0.94

1600 - 1900 (Weekday 3h Session) (05-23-2023)

All vehicles

TIME	Northbound				Southbound				Westbound				
	GA-92 Fairburn Rd (South)				GA-92 Fairburn Rd (North)				Riverside Pkwy				
	Thru 1.1	Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5	U-Turn 1.6	App Total	Left 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
1600 - 1615	345	14	0	359	57	213	0	270	34	127	0	161	790
1615 - 1630	347	9	0	356	45	230	0	275	40	98	0	138	769
1630 - 1645	346	9	1	356	52	217	0	269	36	126	0	162	787
1645 - 1700	382	13	1	396	55	251	0	306	45	134	0	179	881
Hourly Total	1420	45	2	1467	209	911	0	1120	155	485	0	640	3227
1700 - 1715	405	10	0	415	51	233	0	284	33	150	0	183	882
1715 - 1730	412	8	2	422	48	253	0	301	58	145	0	203	926
1730 - 1745	398	7	1	406	61	281	0	342	60	110	0	170	918
1745 - 1800	330	15	0	345	70	227	0	297	68	134	0	202	844
Hourly Total	1545	40	3	1588	230	994	0	1224	219	539	0	758	3570
1800 - 1815	330	25	0	355	47	219	0	266	32	103	0	135	756
1815 - 1830	298	17	0	315	47	220	0	267	40	107	0	147	729
1830 - 1845	266	13	1	280	44	210	0	254	19	76	0	95	629
1845 - 1900	240	14	1	255	43	194	0	237	29	80	0	109	601
Hourly Total	1134	69	2	1205	181	843	0	1024	120	366	0	486	2715
Grand Total	4099	154	7	4260	620	2748	0	3368	494	1390	0	1884	9512
Approach %	96.22	3.62	0.16	-	18.41	81.59	0.00	-	26.22	73.78	0.00	-	-
Intersection %	43.09	1.62	0.07	44.79	6.52	28.89	0.00	35.41	5.19	14.61	0.00	19.81	-
PHF	0.97	0.73	0.50	0.97	0.88	0.91	0.00	0.90	0.82	0.90	0.00	0.91	0.97

Classified Turn Movement Count || Passenger Vehicles (1-3)

Douglasville, GA



Marr Traffic
DATA COLLECTION

www.marrtraffic.com

Site 1 of 3

GA-92 Fairburn Rd (South)
GA-92 Fairburn Rd (North)

Riverside Pkwy

Date

Tuesday, May 23, 2023

Lat/Long

33.707188°, -84.660750°

Weather

Cloudy
67°F

0600 - 0900 (Weekday 3h Session) (05-23-2023)

Passenger Vehicles (1-3)

TIME	Northbound				Southbound				Westbound				
	GA-92 Fairburn Rd (South)				GA-92 Fairburn Rd (North)				Riverside Pkwy				
	Thru 1.1	Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5	U-Turn 1.6	App Total	Left 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
0600 - 0615	79	22	0	101	61	170	0	231	13	19	0	32	364
0615 - 0630	91	19	0	110	84	258	0	342	14	20	0	34	486
0630 - 0645	121	31	0	152	116	321	0	437	7	30	0	37	626
0645 - 0700	119	43	0	162	131	288	0	419	12	36	0	48	629
Hourly Total	410	115	0	525	392	1037	0	1429	46	105	0	151	2105
0700 - 0715	149	43	0	192	130	206	0	336	10	51	0	61	589
0715 - 0730	181	43	0	224	133	273	0	406	13	58	0	71	701
0730 - 0745	191	33	0	224	127	338	0	465	28	96	0	124	813
0745 - 0800	189	20	0	209	97	396	0	493	24	71	0	95	797
Hourly Total	710	139	0	849	487	1213	0	1700	75	276	0	351	2900
0800 - 0815	213	20	1	234	97	414	1	512	43	53	0	96	842
0815 - 0830	209	28	0	237	82	285	0	367	28	52	0	80	684
0830 - 0845	231	34	0	265	84	262	0	346	8	49	0	57	668
0845 - 0900	156	18	1	175	63	206	0	269	8	45	0	53	497
Hourly Total	809	100	2	911	326	1167	1	1494	87	199	0	286	2691
Grand Total	1929	354	2	2285	1205	3417	1	4623	208	580	0	788	7696
Approach %	84.42	15.49	0.09	-	26.07	73.91	0.02	-	26.40	73.60	0.00	-	-
Intersection %	25.06	4.60	0.03	29.69	15.66	44.40	0.01	60.07	2.70	7.54	0.00	10.24	-

1600 - 1900 (Weekday 3h Session) (05-23-2023)

Passenger Vehicles (1-3)

TIME	Northbound				Southbound				Westbound				
	GA-92 Fairburn Rd (South)				GA-92 Fairburn Rd (North)				Riverside Pkwy				
	Thru 1.1	Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5	U-Turn 1.6	App Total	Left 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
1600 - 1615	331	13	0	344	54	208	0	262	33	121	0	154	760
1615 - 1630	334	8	0	342	40	218	0	258	40	91	0	131	731
1630 - 1645	341	8	1	350	47	206	0	253	35	119	0	154	757
1645 - 1700	366	11	1	378	50	235	0	285	45	130	0	175	838
Hourly Total	1372	40	2	1414	191	867	0	1058	153	461	0	614	3086
1700 - 1715	388	10	0	398	47	227	0	274	32	144	0	176	848
1715 - 1730	403	8	2	413	43	245	0	288	58	141	0	199	900
1730 - 1745	388	6	1	395	58	275	0	333	59	106	0	165	893
1745 - 1800	315	13	0	328	64	223	0	287	68	130	0	198	813
Hourly Total	1494	37	3	1534	212	970	0	1182	217	521	0	738	3454
1800 - 1815	317	23	0	340	42	211	0	253	32	100	0	132	725
1815 - 1830	292	17	0	309	42	215	0	257	40	103	0	143	709
1830 - 1845	261	12	1	274	41	201	0	242	19	72	0	91	607
1845 - 1900	236	14	1	251	39	191	0	230	29	77	0	106	587
Hourly Total	1106	66	2	1174	164	818	0	982	120	352	0	472	2628
Grand Total	3972	143	7	4122	567	2655	0	3222	490	1334	0	1824	9168
Approach %	96.36	3.47	0.17	-	17.60	82.40	0.00	-	26.86	73.14	0.00	-	-
Intersection %	43.32	1.56	0.08	44.96	6.18	28.96	0.00	35.14	5.34	14.55	0.00	19.90	-

Classified Turn Movement Count || Single Unit Trucks (4-7)

Douglasville, GA

Site 1 of 3

GA-92 Fairburn Rd (South)
GA-92 Fairburn Rd (North)

Riverside Pkwy

Date

Tuesday, May 23, 2023

Lat/Long

33.707188°, -84.660750°

Weather

Cloudy
67°F

0600 - 0900 (Weekday 3h Session) (05-23-2023)

Single Unit Trucks (4-7)

TIME	Northbound				Southbound				Westbound				
	GA-92 Fairburn Rd (South)				GA-92 Fairburn Rd (North)				Riverside Pkwy				
	Thru 1.1	Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5	U-Turn 1.6	App Total	Left 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
0600 - 0615	4	0	0	4	2	1	0	3	0	1	0	1	8
0615 - 0630	3	0	0	3	2	2	0	4	1	2	0	3	10
0630 - 0645	4	0	0	4	1	8	0	9	1	2	0	3	16
0645 - 0700	6	0	0	6	2	3	0	5	2	1	0	3	14
Hourly Total	17	0	0	17	7	14	0	21	4	6	0	10	48
0700 - 0715	4	0	0	4	6	5	0	11	0	2	0	2	17
0715 - 0730	3	2	0	5	4	7	0	11	2	3	0	5	21
0730 - 0745	6	3	0	9	3	17	0	20	3	3	0	6	35
0745 - 0800	13	1	0	14	5	14	0	19	3	2	0	5	38
Hourly Total	26	6	0	32	18	43	0	61	8	10	0	18	111
0800 - 0815	8	2	0	10	4	11	0	15	0	2	0	2	27
0815 - 0830	10	2	0	12	3	13	0	16	0	3	0	3	31
0830 - 0845	10	0	0	10	4	4	0	8	1	2	0	3	21
0845 - 0900	5	0	0	5	4	4	0	8	1	2	0	3	16
Hourly Total	33	4	0	37	15	32	0	47	2	9	0	11	95
Grand Total	76	10	0	86	40	89	0	129	14	25	0	39	254
Approach %	88.37	11.63	0.00	-	31.01	68.99	0.00	-	35.90	64.10	0.00	-	-
Intersection %	29.92	3.94	0.00	33.86	15.75	35.04	0.00	50.79	5.51	9.84	0.00	15.35	-

1600 - 1900 (Weekday 3h Session) (05-23-2023)

Single Unit Trucks (4-7)

TIME	Northbound				Southbound				Westbound				
	GA-92 Fairburn Rd (South)				GA-92 Fairburn Rd (North)				Riverside Pkwy				
	Thru 1.1	Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5	U-Turn 1.6	App Total	Left 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
1600 - 1615	5	1	0	6	1	1	0	2	0	4	0	4	12
1615 - 1630	7	1	0	8	1	5	0	6	0	5	0	5	19
1630 - 1645	1	0	0	1	2	4	0	6	0	4	0	4	11
1645 - 1700	7	1	0	8	1	1	0	2	0	3	0	3	13
Hourly Total	20	3	0	23	5	11	0	16	0	16	0	16	55
1700 - 1715	8	0	0	8	1	2	0	3	1	4	0	5	16
1715 - 1730	4	0	0	4	1	5	0	6	0	2	0	2	12
1730 - 1745	8	0	0	8	1	1	0	2	0	3	0	3	13
1745 - 1800	8	0	0	8	1	1	0	2	0	2	0	2	12
Hourly Total	28	0	0	28	4	9	0	13	1	11	0	12	53
1800 - 1815	6	0	0	6	2	1	0	3	0	2	0	2	11
1815 - 1830	4	0	0	4	1	2	0	3	0	2	0	2	9
1830 - 1845	3	0	0	3	1	1	0	2	0	2	0	2	7
1845 - 1900	1	0	0	1	1	2	0	3	0	2	0	2	6
Hourly Total	14	0	0	14	5	6	0	11	0	8	0	8	33
Grand Total	62	3	0	65	14	26	0	40	1	35	0	36	141
Approach %	95.38	4.62	0.00	-	35.00	65.00	0.00	-	2.78	97.22	0.00	-	-
Intersection %	43.97	2.13	0.00	46.10	9.93	18.44	0.00	28.37	0.71	24.82	0.00	25.53	-

Classified Turn Movement Count || Combination Trucks (8-13)

Douglasville, GA

Site 1 of 3

GA-92 Fairburn Rd (South)
GA-92 Fairburn Rd (North)

Riverside Pkwy

Date

Tuesday, May 23, 2023

Lat/Long

33.707188°, -84.660750°

Weather

Cloudy
67°F

0600 - 0900 (Weekday 3h Session) (05-23-2023)

Combination Trucks (8-13)

TIME	Northbound				Southbound				Westbound				
	GA-92 Fairburn Rd (South)				GA-92 Fairburn Rd (North)				Riverside Pkwy				
	Thru 1.1	Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5	U-Turn 1.6	App Total	Left 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
0600 - 0615	3	0	0	3	1	4	0	5	2	0	0	2	10
0615 - 0630	7	0	0	7	0	3	0	3	0	0	0	0	10
0630 - 0645	4	0	0	4	0	3	0	3	1	0	0	1	8
0645 - 0700	5	0	0	5	0	7	0	7	0	0	0	0	12
Hourly Total	19	0	0	19	1	17	0	18	3	0	0	3	40
0700 - 0715	1	1	0	2	2	4	0	6	0	2	0	2	10
0715 - 0730	2	1	0	3	2	7	0	9	0	2	0	2	14
0730 - 0745	7	1	0	8	2	6	0	8	0	3	0	3	19
0745 - 0800	6	1	0	7	1	10	0	11	1	2	0	3	21
Hourly Total	16	4	0	20	7	27	0	34	1	9	0	10	64
0800 - 0815	7	1	0	8	1	7	0	8	0	1	0	1	17
0815 - 0830	2	1	0	3	0	7	0	7	0	1	0	1	11
0830 - 0845	10	1	0	11	1	13	0	14	1	1	0	2	27
0845 - 0900	7	2	0	9	1	7	0	8	2	1	0	3	20
Hourly Total	26	5	0	31	3	34	0	37	3	4	0	7	75
Grand Total	61	9	0	70	11	78	0	89	7	13	0	20	179
Approach %	87.14	12.86	0.00	-	12.36	87.64	0.00	-	35.00	65.00	0.00	-	
Intersection %	34.08	5.03	0.00	39.11	6.15	43.58	0.00	49.72	3.91	7.26	0.00	11.17	

1600 - 1900 (Weekday 3h Session) (05-23-2023)

Combination Trucks (8-13)

TIME	Northbound				Southbound				Westbound				
	GA-92 Fairburn Rd (South)				GA-92 Fairburn Rd (North)				Riverside Pkwy				
	Thru 1.1	Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5	U-Turn 1.6	App Total	Left 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
1600 - 1615	9	0	0	9	2	4	0	6	1	2	0	3	18
1615 - 1630	6	0	0	6	4	7	0	11	0	2	0	2	19
1630 - 1645	4	1	0	5	3	7	0	10	1	3	0	4	19
1645 - 1700	9	1	0	10	4	15	0	19	0	1	0	1	30
Hourly Total	28	2	0	30	13	33	0	46	2	8	0	10	86
1700 - 1715	9	0	0	9	3	4	0	7	0	2	0	2	18
1715 - 1730	5	0	0	5	4	3	0	7	0	2	0	2	14
1730 - 1745	2	1	0	3	2	5	0	7	1	1	0	2	12
1745 - 1800	7	2	0	9	5	3	0	8	0	2	0	2	19
Hourly Total	23	3	0	26	14	15	0	29	1	7	0	8	63
1800 - 1815	7	2	0	9	3	7	0	10	0	1	0	1	20
1815 - 1830	2	0	0	2	4	3	0	7	0	2	0	2	11
1830 - 1845	2	1	0	3	2	6	0	8	0	2	0	2	13
1845 - 1900	3	0	0	3	3	1	0	4	0	1	0	1	8
Hourly Total	14	3	0	17	12	17	0	29	0	6	0	6	52
Grand Total	65	8	0	73	39	65	0	104	3	21	0	24	201
Approach %	89.04	10.96	0.00	-	37.50	62.50	0.00	-	12.50	87.50	0.00	-	
Intersection %	32.34	3.98	0.00	36.32	19.40	32.34	0.00	51.74	1.49	10.45	0.00	11.94	



[Click here for Map](#)

Peak Hour Turning Movement Count

Douglasville, GA



www.marrtraffic.com

Tuesday, May 23, 2023	
Period	0600 - 0900
Peak Hour	0700 - 0800

* the Peak Hour Diagram does not include Bikes

Session Parameters

(Drop Down Menu)

Peak Hour

Volume



Time	Northbound										Eastbound					Westbound					Int Total
	Roberts Rd										Riverside Pkwy (West)					Riverside Pkwy (East)					
	Left 2.1		Right 2.2	U-Turn 2.3	App Total					App Total		Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8	U-Turn 2.9	App Total		
0700 - 0715	0	-	0	0	0	-	-	-	-	0	-	151	2	0	153	1	62	-	0	63	216
0715 - 0730	1	-	0	0	1	-	-	-	-	0	-	187	2	0	189	1	71	-	0	72	262
0730 - 0745	1	-	0	0	1	-	-	-	-	0	-	163	2	0	165	0	85	-	0	85	251
0745 - 0800	0	-	0	0	0	-	-	-	-	0	-	132	0	0	132	1	115	-	0	116	248
Total	2	0	0	0	2	0	0	0	0	0	0	633	6	0	639	3	333	0	0	336	977
Approach %	100.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	99.06	0.94	0.00	-	0.89	99.11	0.00	0.00	-	
PHF	0.50	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.85	0.75	0.00	0.85	0.75	0.72	0.00	0.00	0.72	0.93

Time	Northbound										Eastbound					Westbound					Int Total
	Roberts Rd										Riverside Pkwy (West)					Riverside Pkwy (East)					
	Left 2.1		Right 2.2	U-Turn 2.3	App Total					App Total		Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8		U-Turn 2.9	App Total	
0700 - 0715	0	-	0	0	0	-	-	-	-	0	-	142	1	0	143	1	60	-	0	61	204
0715 - 0730	1	-	0	0	1	-	-	-	-	0	-	181	2	0	183	1	63	-	0	64	248
0730 - 0745	0	-	0	0	0	-	-	-	-	0	-	153	2	0	155	0	81	-	0	81	236
0745 - 0800	0	-	0	0	0	-	-	-	-	0	-	123	0	0	123	1	103	-	0	104	227
Total	1	0	0	0	1	0	0	0	0	0	0	599	5	0	604	3	307	0	0	310	915
Approach %	100.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	99.17	0.83	0.00	-	0.97	99.03	0.00	0.00	-	
PHF	0.25	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.83	0.63	0.00	0.83	0.75	0.75	0.00	0.00	0.75	0.92

Time	Northbound										Eastbound					Westbound					Int Total	
	Roberts Rd										Riverside Pkwy (West)					Riverside Pkwy (East)						
	Left		Right	U-Turn	App					App		Thru	Right	U-Turn	App	Left	Thru		U-Turn	App		Total
	2.1		2.2	2.3	Total					Total		2.4	2.5	2.6	Total	2.7	2.8		2.9	Total		
0700 - 0715	0	-	0	0	0	-	-	-	-	0	-	7	1	0	8	0	1	-	0	1	9	
0715 - 0730	0	-	0	0	0	-	-	-	-	0	-	5	0	0	5	0	7	-	0	7	12	
0730 - 0745	1	-	0	0	1	-	-	-	-	0	-	5	0	0	5	0	2	-	0	2	8	
0745 - 0800	0	-	0	0	0	-	-	-	-	0	-	6	0	0	6	0	6	-	0	6	12	
Total	1	0	0	0	1	0	0	0	0	0	0	23	1	0	24	0	16	0	0	16	41	
Approach %	100.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	95.83	4.17	0.00	-	0.00	100.00	0.00	0.00	-		
PHF	0.25	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.82	0.25	0.00	0.75	0.00	0.57	0.00	0.00	0.57	0.85	

Time	Northbound										Eastbound				Westbound					Int Total	
	Roberts Rd										Riverside Pkwy (West)				Riverside Pkwy (East)						
	Left 2.1		Right 2.2	U-Turn 2.3	App Total					App Total	Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8	U-Turn 2.9	App Total			
0700 - 0715	0	-	0	0	0	-	-	-	-	0	-	2	0	0	2	0	1	-	0	1	3
0715 - 0730	0	-	0	0	0	-	-	-	-	0	-	1	0	0	1	0	1	-	0	1	2
0730 - 0745	0	-	0	0	0	-	-	-	-	0	-	5	0	0	5	0	2	-	0	2	7
0745 - 0800	0	-	0	0	0	-	-	-	-	0	-	3	0	0	3	0	6	-	0	6	9
Total	0	0	0	0	0	0	0	0	0	0	0	11	0	0	11	0	10	0	0	10	21
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.55	0.00	0.42	0.00	0.00	0.42	0.58

[illegible]



[Click here for Map](#)

Peak Hour Turning Movement Count

Douglasville, GA



www.marrtraffic.com

Tuesday, May 23, 2023	
Period	1600 - 1900
Peak Hour	1700 - 1800

* the Peak Hour Diagram does not include Bikes

Session Parameters

(Drop Down Menu)

Peak Hour

Volume



Time	Northbound										Eastbound					Westbound					Int Total
	Roberts Rd										Riverside Pkwy (West)					Riverside Pkwy (East)					
	Left 2.1		Right 2.2	U-Turn 2.3	App Total					App Total		Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8		U-Turn 2.9	App Total	
1700 - 1715	0	-	0	0	0	-	-	-	-	0	-	77	0	0	77	0	175	-	0	175	252
1715 - 1730	0	-	0	0	0	-	-	-	-	0	-	61	0	0	61	0	190	-	0	190	251
1730 - 1745	2	-	0	0	2	-	-	-	-	0	-	63	1	0	64	0	193	-	0	193	259
1745 - 1800	0	-	0	0	0	-	-	-	-	0	-	77	0	0	77	0	180	-	0	180	257
Total	2	0	0	0	2	0	0	0	0	0	0	278	1	0	279	0	738	0	0	738	1019
Approach %	100.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	99.64	0.36	0.00	-	0.00	100.00	0.00	0.00	-	
PHF	0.25	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.90	0.25	0.00	0.91	0.00	0.96	0.00	0.00	0.96	0.98

Time	Northbound										Eastbound				Westbound					Int Total	
	Roberts Rd										Riverside Pkwy (West)				Riverside Pkwy (East)						
	Left 2.1		Right 2.2	U-Turn 2.3	App Total					App Total		Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8		U-Turn 2.9		App Total
1700 - 1715	0	-	0	0	0	-	-	-	-	0	-	72	0	0	72	0	168	-	0	168	240
1715 - 1730	0	-	0	0	0	-	-	-	-	0	-	56	0	0	56	0	186	-	0	186	242
1730 - 1745	2	-	0	0	2	-	-	-	-	0	-	59	1	0	60	0	189	-	0	189	251
1745 - 1800	0	-	0	0	0	-	-	-	-	0	-	70	0	0	70	0	175	-	0	175	245
Total	2	0	0	0	2	0	0	0	0	0	0	257	1	0	258	0	718	0	0	718	978
Approach %	100.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	99.61	0.39	0.00	-	0.00	100.00	0.00	0.00	-	
PHF	0.25	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.89	0.25	0.00	0.90	0.00	0.95	0.00	0.00	0.95	0.97

Time	Northbound										Eastbound				Westbound					Int Total		
	Roberts Rd										Riverside Pkwy (West)				Riverside Pkwy (East)							
	Left 2.1		Right 2.2	U-Turn 2.3	App Total					App Total			Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8	U-Turn 2.9		App Total	
1700 - 1715	0	-	0	0	0	-	-	-	-	0	-	-	1	0	0	1	0	5	-	0	5	6
1715 - 1730	0	-	0	0	0	-	-	-	-	0	-	2	0	0	2	0	2	-	0	2	4	
1730 - 1745	0	-	0	0	0	-	-	-	-	0	-	1	0	0	1	0	1	-	0	1	2	
1745 - 1800	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	4	-	0	4	
Total	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	12	0	0	12	16	
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-		
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.50	0.00	0.60	0.00	0.00	0.60	0.67	

Time	Northbound										Eastbound				Westbound					Int	
	Roberts Rd										Riverside Pkwy (West)				Riverside Pkwy (East)						
	Left 2.1		Right 2.2	U-Turn 2.3	App Total					App Total	Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8	U-Turn 2.9	App Total			
1700 - 1715	0	-	0	0	0	-	-	-	-	0	-	4	0	0	4	0	2	-	0	2	6
1715 - 1730	0	-	0	0	0	-	-	-	-	0	-	3	0	0	3	0	2	-	0	2	5
1730 - 1745	0	-	0	0	0	-	-	-	-	0	-	3	0	0	3	0	3	-	0	3	6
1745 - 1800	0	-	0	0	0	-	-	-	-	0	-	7	0	0	7	0	1	-	0	1	8
Total	0	0	0	0	0	0	0	0	0	0	0	17	0	0	17	0	8	0	0	8	25
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.61	0.00	0.67	0.00	0.00	0.67	0.78

[illegible]

Classified Turn Movement Count || All vehicles

Douglasville, GA



Marr Traffic
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Site 2 of 3

Roberts Rd

Riverside Pkwy (West)

Riverside Pkwy (East)

Date

Tuesday, May 23, 2023

Lat/Long

33.713517°, -84.623958°

Weather

Cloudy
67°F

0600 - 0900 (Weekday 3h Session) (05-23-2023)

All vehicles

Northbound				
Roberts Rd				
TIME	Left 2.1	Right 2.2	U-Turn 2.3	App Total
0600 - 0615	0	0	0	0
0615 - 0630	0	1	0	1
0630 - 0645	0	0	0	0
0645 - 0700	0	0	0	0
Hourly Total	0	1	0	1
0700 - 0715	0	0	0	0
0715 - 0730	1	0	0	1
0730 - 0745	1	0	0	1
0745 - 0800	0	0	0	0
Hourly Total	2	0	0	2
0800 - 0815	0	0	0	0
0815 - 0830	0	0	0	0
0830 - 0845	0	0	0	0
0845 - 0900	0	0	0	0
Hourly Total	0	0	0	0
Grand Total	2	1	0	3
Approach %	66.67	33.33	0.00	-
Intersection %	0.09	0.04	0.00	0.13
PHF	0.50	0.00	0.00	0.50

Eastbound				Westbound					
Riverside Pkwy (West)				Riverside Pkwy (East)					
Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8		U-Turn 2.9	App Total	Int Total
93	0	0	93	0	29		0	29	122
118	0	0	118	0	29		0	29	148
149	0	0	149	0	47		0	47	196
167	0	0	167	1	47		0	48	215
527	0	0	527	1	152		0	153	681
151	2	0	153	1	62		0	63	216
187	2	0	189	1	71		0	72	262
163	2	0	165	0	85		0	85	251
132	0	0	132	1	115		0	116	248
633	6	0	639	3	333		0	336	977
110	0	0	110	1	80		0	81	191
112	0	0	112	0	78		0	78	190
94	0	1	95	0	66		0	66	161
82	1	0	83	0	54		0	54	137
398	1	1	400	1	278		0	279	679
1558	7	1	1566	5	763		0	768	2337
99.49	0.45	0.06	-	0.65	99.35		0.00	-	
66.67	0.30	0.04	67.01	0.21	32.65		0.00	32.86	
0.85	0.75	0.00	0.85	0.75	0.72		0.00	0.72	0.93

1600 - 1900 (Weekday 3h Session) (05-23-2023)

All vehicles

Northbound				
Roberts Rd				
TIME	Left 2.1	Right 2.2	U-Turn 2.3	App Total
1600 - 1615	4	2	0	6
1615 - 1630	1	0	0	1
1630 - 1645	1	0	0	1
1645 - 1700	0	0	0	0
Hourly Total	6	2	0	8
1700 - 1715	0	0	0	0
1715 - 1730	0	0	0	0
1730 - 1745	2	0	0	2
1745 - 1800	0	0	0	0
Hourly Total	2	0	0	2
1800 - 1815	0	0	0	0
1815 - 1830	0	0	0	0
1830 - 1845	1	0	0	1
1845 - 1900	0	0	0	0
Hourly Total	1	0	0	1
Grand Total	9	2	0	11
Approach %	81.82	18.18	0.00	-
Intersection %	0.35	0.08	0.00	0.42
PHF	0.25	0.00	0.00	0.25

Eastbound				Westbound					
Riverside Pkwy (West)				Riverside Pkwy (East)					
Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8		U-Turn 2.9	App Total	Int Total
63	1	0	64	0	151		0	151	221
53	0	0	53	0	126		0	126	180
55	0	0	55	0	160		0	160	216
65	0	0	65	0	157		0	157	222
236	1	0	237	0	594		0	594	839
77	0	0	77	0	175		0	175	252
61	0	0	61	0	190		0	190	251
63	1	0	64	0	193		0	193	259
77	0	0	77	0	180		0	180	257
278	1	0	279	0	738		0	738	1019
80	0	0	80	0	124		0	124	204
77	0	0	77	1	120		0	121	198
60	0	0	60	1	125		0	126	187
70	0	0	70	0	73		0	73	143
287	0	0	287	2	442		0	444	732
801	2	0	803	2	1774		0	1776	2590
99.75	0.25	0.00	-	0.11	99.89		0.00	-	
30.93	0.08	0.00	31.00	0.08	68.49		0.00	68.57	
0.90	0.25	0.00	0.91	0.00	0.96		0.00	0.96	0.98

Classified Turn Movement Count || Passenger Vehicles (1-3)

Douglasville, GA



Marr Traffic
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Site 2 of 3

Roberts Rd

Riverside Pkwy (West)

Riverside Pkwy (East)

Date

Tuesday, May 23, 2023

Lat/Long

33.713517°, -84.623958°

Weather

Cloudy

67°F

0600 - 0900 (Weekday 3h Session) (05-23-2023)

Passenger Vehicles (1-3)

Northbound					
Roberts Rd					
TIME	Left 2.1	Right 2.2	U-Turn 2.3	App Total	
0600 - 0615	0	0	0	0	
0615 - 0630	0	1	0	1	
0630 - 0645	0	0	0	0	
0645 - 0700	0	0	0	0	
Hourly Total	0	1	0	1	
0700 - 0715	0	0	0	0	
0715 - 0730	1	0	0	1	
0730 - 0745	0	0	0	0	
0745 - 0800	0	0	0	0	
Hourly Total	1	0	0	1	
0800 - 0815	0	0	0	0	
0815 - 0830	0	0	0	0	
0830 - 0845	0	0	0	0	
0845 - 0900	0	0	0	0	
Hourly Total	0	0	0	0	
Grand Total	1	1	0	2	
Approach %	50.00	50.00	0.00	-	
Intersection %	0.05	0.05	0.00	0.09	

Eastbound					Westbound					
Riverside Pkwy (West)					Riverside Pkwy (East)					
Thru 2.4	Right 2.5	U-Turn 2.6	App Total		Left 2.7	Thru 2.8		U-Turn 2.9	App Total	Int Total
92	0	0	92		0	25		0	25	117
113	0	0	113		0	25		0	25	139
148	0	0	148		0	44		0	44	192
166	0	0	166		0	45		0	45	211
519	0	0	519		0	139		0	139	659
142	1	0	143		1	60		0	61	204
181	2	0	183		1	63		0	64	248
153	2	0	155		0	81		0	81	236
123	0	0	123		1	103		0	104	227
599	5	0	604		3	307		0	310	915
100	0	0	100		1	77		0	78	178
106	0	0	106		0	73		0	73	179
88	0	1	89		0	59		0	59	148
78	1	0	79		0	52		0	52	131
372	1	1	374		1	261		0	262	636
1490	6	1	1497		4	707		0	711	2210
99.53	0.40	0.07	-		0.56	99.44		0.00	-	
67.42	0.27	0.05	67.74		0.18	31.99		0.00	32.17	

1600 - 1900 (Weekday 3h Session) (05-23-2023)

Passenger Vehicles (1-3)

Northbound					
Roberts Rd					
TIME	Left 2.1	Right 2.2	U-Turn 2.3	App Total	
1600 - 1615	4	2	0	6	
1615 - 1630	0	0	0	0	
1630 - 1645	1	0	0	1	
1645 - 1700	0	0	0	0	
Hourly Total	5	2	0	7	
1700 - 1715	0	0	0	0	
1715 - 1730	0	0	0	0	
1730 - 1745	2	0	0	2	
1745 - 1800	0	0	0	0	
Hourly Total	2	0	0	2	
1800 - 1815	0	0	0	0	
1815 - 1830	0	0	0	0	
1830 - 1845	1	0	0	1	
1845 - 1900	0	0	0	0	
Hourly Total	1	0	0	1	
Grand Total	8	2	0	10	
Approach %	80.00	20.00	0.00	-	
Intersection %	0.32	0.08	0.00	0.41	

Eastbound					Westbound					
Riverside Pkwy (West)					Riverside Pkwy (East)					
Thru 2.4	Right 2.5	U-Turn 2.6	App Total		Left 2.7	Thru 2.8		U-Turn 2.9	App Total	Int Total
57	0	0	57		0	146		0	146	209
46	0	0	46		0	121		0	121	167
52	0	0	52		0	154		0	154	207
59	0	0	59		0	149		0	149	208
214	0	0	214		0	570		0	570	791
72	0	0	72		0	168		0	168	240
56	0	0	56		0	186		0	186	242
59	1	0	60		0	189		0	189	251
70	0	0	70		0	175		0	175	245
257	1	0	258		0	718		0	718	978
75	0	0	75		0	122		0	122	197
72	0	0	72		1	114		0	115	187
57	0	0	57		1	122		0	123	181
62	0	0	62		0	71		0	71	133
266	0	0	266		2	429		0	431	698
737	1	0	738		2	1717		0	1719	2467
99.86	0.14	0.00	-		0.12	99.88		0.00	-	
29.87	0.04	0.00	29.91		0.08	69.60		0.00	69.68	

Classified Turn Movement Count || Single Unit Trucks (4-7)

Douglasville, GA



Marr Traffic
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Site 2 of 3

Roberts Rd

Riverside Pkwy (West)

Riverside Pkwy (East)

Date

Tuesday, May 23, 2023

Lat/Long

33.713517°, -84.623958°

Weather

Cloudy

67°F

0600 - 0900 (Weekday 3h Session) (05-23-2023)

Single Unit Trucks (4-7)

Northbound				
Roberts Rd				
TIME	Left 2.1	Right 2.2	U-Turn 2.3	App Total
0600 - 0615	0	0	0	0
0615 - 0630	0	0	0	0
0630 - 0645	0	0	0	0
0645 - 0700	0	0	0	0
Hourly Total	0	0	0	0
0700 - 0715	0	0	0	0
0715 - 0730	0	0	0	0
0730 - 0745	1	0	0	1
0745 - 0800	0	0	0	0
Hourly Total	1	0	0	1
0800 - 0815	0	0	0	0
0815 - 0830	0	0	0	0
0830 - 0845	0	0	0	0
0845 - 0900	0	0	0	0
Hourly Total	0	0	0	0
Grand Total	1	0	0	1
Approach %	100.00	0.00	0.00	-
Intersection %	1.16	0.00	0.00	1.16

Eastbound				Westbound			
Riverside Pkwy (West)				Riverside Pkwy (East)			
Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8	U-Turn 2.9	App Total
0	0	0	0	0	2	0	2
5	0	0	5	0	3	0	3
1	0	0	1	0	3	0	3
1	0	0	1	0	2	0	2
7	0	0	7	0	10	0	10
7	1	0	8	0	1	0	1
5	0	0	5	0	7	0	7
5	0	0	5	0	2	0	2
6	0	0	6	0	6	0	6
23	1	0	24	0	16	0	16
6	0	0	6	0	2	0	2
4	0	0	4	0	3	0	3
4	0	0	4	0	5	0	5
4	0	0	4	0	0	0	0
18	0	0	18	0	10	0	10
48	1	0	49	0	36	0	36
97.96	2.04	0.00	-	0.00	100.00	0.00	-
55.81	1.16	0.00	56.98	0.00	41.86	0.00	41.86

1600 - 1900 (Weekday 3h Session) (05-23-2023)

Single Unit Trucks (4-7)

Northbound				
Roberts Rd				
TIME	Left 2.1	Right 2.2	U-Turn 2.3	App Total
1600 - 1615	0	0	0	0
1615 - 1630	1	0	0	1
1630 - 1645	0	0	0	0
1645 - 1700	0	0	0	0
Hourly Total	1	0	0	1
1700 - 1715	0	0	0	0
1715 - 1730	0	0	0	0
1730 - 1745	0	0	0	0
1745 - 1800	0	0	0	0
Hourly Total	0	0	0	0
1800 - 1815	0	0	0	0
1815 - 1830	0	0	0	0
1830 - 1845	0	0	0	0
1845 - 1900	0	0	0	0
Hourly Total	0	0	0	0
Grand Total	1	0	0	1
Approach %	100.00	0.00	0.00	-
Intersection %	1.92	0.00	0.00	1.92

Eastbound				Westbound			
Riverside Pkwy (West)				Riverside Pkwy (East)			
Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8	U-Turn 2.9	App Total
1	1	0	2	0	2	0	2
3	0	0	3	0	4	0	4
1	0	0	1	0	3	0	3
2	0	0	2	0	5	0	5
7	1	0	8	0	14	0	14
1	0	0	1	0	5	0	5
2	0	0	2	0	2	0	2
1	0	0	1	0	1	0	1
0	0	0	0	0	4	0	4
4	0	0	4	0	12	0	12
0	0	0	0	0	2	0	2
2	0	0	2	0	3	0	3
1	0	0	1	0	1	0	1
3	0	0	3	0	1	0	1
6	0	0	6	0	7	0	7
17	1	0	18	0	33	0	33
94.44	5.56	0.00	-	0.00	100.00	0.00	-
32.69	1.92	0.00	34.62	0.00	63.46	0.00	63.46

Classified Turn Movement Count || Combination Trucks (8-13)

Douglasville, GA



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Site 2 of 3

Roberts Rd

Riverside Pkwy (West)

Riverside Pkwy (East)

Date

Tuesday, May 23, 2023

Lat/Long

33.713517°, -84.623958°

Weather

Cloudy

67°F

0600 - 0900 (Weekday 3h Session) (05-23-2023)

Combination Trucks (8-13)

Northbound				
Roberts Rd				
TIME	Left 2.1	Right 2.2	U-Turn 2.3	App Total
0600 - 0615	0	0	0	0
0615 - 0630	0	0	0	0
0630 - 0645	0	0	0	0
0645 - 0700	0	0	0	0
Hourly Total	0	0	0	0
0700 - 0715	0	0	0	0
0715 - 0730	0	0	0	0
0730 - 0745	0	0	0	0
0745 - 0800	0	0	0	0
Hourly Total	0	0	0	0
0800 - 0815	0	0	0	0
0815 - 0830	0	0	0	0
0830 - 0845	0	0	0	0
0845 - 0900	0	0	0	0
Hourly Total	0	0	0	0
Grand Total	0	0	0	0
Approach %	0.00	0.00	0.00	-
Intersection %	0.00	0.00	0.00	0.00

Eastbound				Westbound					
Riverside Pkwy (West)				Riverside Pkwy (East)					
Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8		U-Turn 2.9	App Total	Int Total
1	0	0	1	0	2		0	2	3
0	0	0	0	0	1		0	1	1
0	0	0	0	0	0		0	0	0
0	0	0	0	1	0		0	1	1
1	0	0	1	1	3		0	4	5
2	0	0	2	0	1		0	1	3
1	0	0	1	0	1		0	1	2
5	0	0	5	0	2		0	2	7
3	0	0	3	0	6		0	6	9
11	0	0	11	0	10		0	10	21
4	0	0	4	0	1		0	1	5
2	0	0	2	0	2		0	2	4
2	0	0	2	0	2		0	2	4
0	0	0	0	0	2		0	2	2
8	0	0	8	0	7		0	7	15
20	0	0	20	1	20		0	21	41
100.00	0.00	0.00	-	4.76	95.24		0.00	-	
48.78	0.00	0.00	48.78	2.44	48.78		0.00	51.22	

1600 - 1900 (Weekday 3h Session) (05-23-2023)

Combination Trucks (8-13)

Northbound				
Roberts Rd				
TIME	Left 2.1	Right 2.2	U-Turn 2.3	App Total
1600 - 1615	0	0	0	0
1615 - 1630	0	0	0	0
1630 - 1645	0	0	0	0
1645 - 1700	0	0	0	0
Hourly Total	0	0	0	0
1700 - 1715	0	0	0	0
1715 - 1730	0	0	0	0
1730 - 1745	0	0	0	0
1745 - 1800	0	0	0	0
Hourly Total	0	0	0	0
1800 - 1815	0	0	0	0
1815 - 1830	0	0	0	0
1830 - 1845	0	0	0	0
1845 - 1900	0	0	0	0
Hourly Total	0	0	0	0
Grand Total	0	0	0	0
Approach %	0.00	0.00	0.00	-
Intersection %	0.00	0.00	0.00	0.00

Eastbound				Westbound					
Riverside Pkwy (West)				Riverside Pkwy (East)					
Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8		U-Turn 2.9	App Total	Int Total
5	0	0	5	0	3		0	3	8
4	0	0	4	0	1		0	1	5
2	0	0	2	0	3		0	3	5
4	0	0	4	0	3		0	3	7
15	0	0	15	0	10		0	10	25
4	0	0	4	0	2		0	2	6
3	0	0	3	0	2		0	2	5
3	0	0	3	0	3		0	3	6
7	0	0	7	0	1		0	1	8
17	0	0	17	0	8		0	8	25
5	0	0	5	0	0		0	0	5
3	0	0	3	0	3		0	3	6
2	0	0	2	0	2		0	2	4
5	0	0	5	0	1		0	1	6
15	0	0	15	0	6		0	6	21
47	0	0	47	0	24		0	24	71
100.00	0.00	0.00	-	0.00	100.00		0.00	-	
66.20	0.00	0.00	66.20	0.00	33.80		0.00	33.80	



[Click here for Map](#)

Peak Hour Turning Movement Count

Douglasville, GA



www.marrtraffic.com

Tuesday, May 23, 2023	
Period	0600 - 0900
Peak Hour	0645 - 0745

* the Peak Hour Diagram does not include Bikes

Session Parameters

(Drop Down Menu)

Peak Hour

Volume





[Click here for Map](#)

Peak Hour Turning Movement Count

Douglasville, GA



www.marrtraffic.com

Tuesday, May 23, 2023	
Period	1600 - 1900
Peak Hour	1700 - 1800

* the Peak Hour Diagram does not include Bikes

Session Parameters

(Drop Down Menu)

Peak Hour

Volume



Time	Northbound					Southbound					Eastbound					Westbound					
	Riverside Pkwy (South)					Riverside Pkwy (North)					GA-6 Thornton Rd (West)					GA-6 Thornton Rd (East)					
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	Int Total
1700 - 1715	37	61	50	0	148	44	80	3	0	127	3	215	53	0	271	61	307	55	0	423	969
1715 - 1730	26	52	42	0	120	35	91	6	0	132	3	234	70	0	307	54	329	53	2	438	997
1730 - 1745	33	43	33	0	109	21	76	4	0	101	4	189	65	0	258	67	280	51	1	399	867
1745 - 1800	26	51	42	0	119	23	75	0	0	98	3	234	55	0	292	52	303	52	0	407	916
Total	122	207	167	0	496	123	322	13	0	458	13	872	243	0	1128	234	1219	211	3	1667	3749
Approach %	24.60	41.73	33.67	0.00	-	26.86	70.31	2.84	0.00	-	1.15	77.30	21.54	0.00	-	14.04	73.13	12.66	0.18	-	-
PHF	0.82	0.85	0.84	0.00	0.84	0.70	0.88	0.54	0.00	0.87	0.81	0.93	0.87	0.00	0.92	0.87	0.93	0.96	0.38	0.95	0.94

Time	Northbound					Southbound					Eastbound					Westbound					
	Riverside Pkwy (South)					Riverside Pkwy (North)					GA-6 Thornton Rd (West)					GA-6 Thornton Rd (East)					
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	Int Total
1700 - 1715	34	57	49	0	140	39	75	1	0	115	3	183	52	0	238	61	274	48	0	383	876
1715 - 1730	23	51	41	0	115	33	90	6	0	129	3	206	68	0	277	54	303	45	2	404	925
1730 - 1745	29	41	32	0	102	19	74	4	0	97	2	157	65	0	224	67	252	37	1	357	780
1745 - 1800	24	48	42	0	114	21	70	0	0	91	2	212	51	0	265	51	288	44	0	383	853
Total	110	197	164	0	471	112	309	11	0	432	10	758	236	0	1004	233	1117	174	3	1527	3434
Approach %	23.35	41.83	34.82	0.00	-	25.93	71.53	2.55	0.00	-	1.00	75.50	23.51	0.00	-	15.26	73.15	11.39	0.20	-	-
PHF	0.81	0.86	0.84	0.00	0.84	0.72	0.86	0.46	0.00	0.84	0.83	0.89	0.87	0.00	0.91	0.87	0.92	0.91	0.38	0.94	0.93

Time	Northbound						Southbound						Eastbound						Westbound					
	Riverside Pkwy (South)						Riverside Pkwy (North)						GA-6 Thornton Rd (West)						GA-6 Thornton Rd (East)					
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total		Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total		Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total		Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	Int Total
1700 - 1715	0	3	0	0	3		3	1	1	0	5		0	13	1	0	14		0	10	5	0	15	37
1715 - 1730	1	0	0	0	1		0	0	0	0	0		0	10	2	0	12		0	11	1	0	12	25
1730 - 1745	2	0	0	0	2		0	1	0	0	1		0	8	0	0	8		0	10	4	0	14	25
1745 - 1800	1	1	0	0	2		0	3	0	0	3		0	8	4	0	12		1	2	2	0	5	22
Total	4	4	0	0	8		3	5	1	0	9		0	39	7	0	46		1	33	12	0	46	109
Approach %	50.00	50.00	0.00	0.00	-		33.33	55.56	11.11	0.00	-		0.00	84.78	15.22	0.00	-		2.17	71.74	26.09	0.00	-	
PHF	0.50	0.33	0.00	0.00	0.67		0.25	0.42	0.25	0.00	0.45		0.00	0.75	0.44	0.00	0.82		0.25	0.75	0.60	0.00	0.77	0.74

Time	Northbound					Southbound					Eastbound					Westbound					
	Riverside Pkwy (South)					Riverside Pkwy (North)					GA-6 Thornton Rd (West)					GA-6 Thornton Rd (East)					
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	Int Total
1700 - 1715	3	1	1	0	5	2	4	1	0	7	0	19	0	0	19	0	23	2	0	25	56
1715 - 1730	2	1	1	0	4	2	1	0	0	3	0	18	0	0	18	0	15	7	0	22	47
1730 - 1745	2	2	1	0	5	2	1	0	0	3	2	24	0	0	26	0	18	10	0	28	62
1745 - 1800	1	2	0	0	3	2	2	0	0	4	1	14	0	0	15	0	13	6	0	19	41
Total	8	6	3	0	17	8	8	1	0	17	3	75	0	0	78	0	69	25	0	94	206
Approach %	47.06	35.29	17.65	0.00	-	47.06	47.06	5.88	0.00	-	3.85	96.15	0.00	0.00	-	0.00	73.40	26.60	0.00	-	
PHF	0.67	0.75	0.75	0.00	0.85	1.00	0.50	0.25	0.00	0.61	0.38	0.78	0.00	0.00	0.75	0.00	0.75	0.63	0.00	0.84	0.83

[illegible]

Classified Turn Movement Count || All vehicles

Douglasville, GA



Site 3 of 3

Riverside Pkwy (South)
Riverside Pkwy (North)
GA-6 Thornton Rd (West)
GA-6 Thornton Rd (East)

Date

Tuesday, May 23, 2023

Weather

Cloudy
67°F

Lat/Long

33.740064°, -84.586080°

0600 - 0900 (Weekday 3h Session) (05-23-2023)

All vehicles

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	Riverside Pkwy (South)					Riverside Pkwy (North)					GA-6 Thornton Rd (West)					GA-6 Thornton Rd (East)					
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	
0600 - 0615	14	37	35	0	86	15	25	4	0	44	2	234	27	0	263	21	122	25	0	168	561
0615 - 0630	27	47	46	0	120	40	42	1	0	83	5	297	22	0	324	23	137	12	0	172	699
0630 - 0645	46	49	56	0	151	54	55	2	0	111	0	299	33	0	332	26	131	35	0	192	786
0645 - 0700	34	74	81	0	189	38	69	1	0	108	5	343	28	0	376	25	187	47	0	259	932
Hourly Total	121	207	218	0	546	147	191	8	0	346	12	1173	110	0	1295	95	577	119	0	791	2978
0700 - 0715	26	77	74	0	177	32	44	1	0	77	3	346	19	0	368	24	217	44	0	285	907
0715 - 0730	29	65	69	0	163	35	39	2	0	76	4	281	23	1	309	21	199	53	0	273	821
0730 - 0745	32	75	70	0	177	45	53	1	0	99	1	296	25	0	322	24	188	41	0	253	851
0745 - 0800	20	65	58	0	143	51	56	3	0	110	2	298	27	0	327	26	224	55	1	306	886
Hourly Total	107	282	271	0	660	163	192	7	0	362	10	1221	94	1	1326	95	828	193	1	1117	3465
0800 - 0815	28	67	51	0	146	32	55	0	0	87	4	283	18	0	305	29	176	37	0	242	780
0815 - 0830	29	58	51	0	138	55	51	4	0	110	2	246	15	1	264	23	167	33	0	223	735
0830 - 0845	30	70	38	0	138	33	50	2	0	85	6	274	15	0	295	22	170	36	0	228	746
0845 - 0900	21	39	53	0	113	21	42	6	0	69	2	264	32	0	298	23	179	24	1	227	707
Hourly Total	108	234	193	0	535	141	198	12	0	351	14	1067	80	1	1162	97	692	130	1	920	2968
Grand Total	336	723	682	0	1741	451	581	27	0	1059	36	3461	284	2	3783	287	2097	442	2	2828	9411
Approach %	19.30	41.53	39.17	0.00	-	42.59	54.86	2.55	0.00	-	0.95	91.49	7.51	0.05	-	10.15	74.15	15.63	0.07	-	-
Intersection %	3.57	7.68	7.25	0.00	18.50	4.79	6.17	0.29	0.00	11.25	0.38	36.78	3.02	0.02	40.20	3.05	22.28	4.70	0.02	30.05	-
PHF	0.89	0.94	0.91	0.00	0.93	0.83	0.74	0.63	0.00	0.83	0.65	0.91	0.85	0.25	0.91	0.94	0.91	0.87	0.00	0.94	0.94

1600 - 1900 (Weekday 3h Session) (05-23-2023)

All vehicles

	Northbound					Southbound					Eastbound					Westbound					Int
	Riverside Pkwy (South)					Riverside Pkwy (North)					GA-6 Thornton Rd (West)					GA-6 Thornton Rd (East)					
TIME	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	Total
1600 - 1615	37	45	47	0	129	37	47	3	0	87	5	211	50	0	266	40	277	53	0	370	852
1615 - 1630	34	40	38	0	112	33	73	3	0	109	2	216	46	0	264	39	323	72	0	434	919
1630 - 1645	37	47	33	0	117	49	60	5	0	114	3	218	35	0	256	54	319	49	1	423	910
1645 - 1700	26	45	30	0	101	32	75	3	0	110	4	190	47	0	241	61	279	53	0	393	845
Hourly Total	134	177	148	0	459	151	255	14	0	420	14	835	178	0	1027	194	1198	227	1	1620	3526
1700 - 1715	37	61	50	0	148	44	80	3	0	127	3	215	53	0	271	61	307	55	0	423	969
1715 - 1730	26	52	42	0	120	35	91	6	0	132	3	234	70	0	307	54	329	53	2	438	997
1730 - 1745	33	43	33	0	109	21	76	4	0	101	4	189	65	0	258	67	280	51	1	399	867
1745 - 1800	26	51	42	0	119	23	75	0	0	98	3	234	55	0	292	52	303	52	0	407	916
Hourly Total	122	207	167	0	496	123	322	13	0	458	13	872	243	0	1128	234	1219	211	3	1667	3749
1800 - 1815	39	58	42	0	139	29	50	2	0	81	2	192	43	0	237	38	229	34	0	301	758
1815 - 1830	39	52	39	0	130	24	58	3	0	85	2	205	40	0	247	44	271	38	0	353	815
1830 - 1845	48	35	43	0	126	30	58	2	0	90	1	155	36	0	192	36	267	22	0	325	733
1845 - 1900	35	35	36	0	106	20	30	2	0	52	1	160	35	0	196	30	196	32	0	258	612
Hourly Total	161	180	160	0	501	103	196	9	0	308	6	712	154	0	872	148	963	126	0	1237	2918
Grand Total	417	564	475	0	1456	377	773	36	0	1186	33	2419	575	0	3027	576	3380	564	4	4524	10193
Approach %	28.64	38.74	32.62	0.00	-	31.79	65.18	3.04	0.00	-	1.09	79.91	19.00	0.00	-	12.73	74.71	12.47	0.09	-	
Intersection %	4.09	5.53	4.66	0.00	14.28	3.70	7.58	0.35	0.00	11.64	0.32	23.73	5.64	0.00	29.70	5.65	33.16	5.53	0.04	44.38	
PHF	0.82	0.85	0.84	0.00	0.84	0.70	0.88	0.54	0.00	0.87	0.81	0.93	0.87	0.00	0.92	0.87	0.93	0.96	0.38	0.95	0.94

Classified Turn Movement Count || Passenger Vehicles (1-3)

Douglasville, GA



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Site 3 of 3

Riverside Pkwy (South)
Riverside Pkwy (North)
GA-6 Thornton Rd (West)
GA-6 Thornton Rd (East)

Date

Tuesday, May 23, 2023

Weather

Cloudy
67°F

Lat/Long

33.740064°, -84.586080°

0600 - 0900 (Weekday 3h Session) (05-23-2023)

Passenger Vehicles (1-3)

TIME	Northbound					Southbound					Eastbound					Westbound					Int
	Riverside Pkwy (South)					Riverside Pkwy (North)					GA-6 Thornton Rd (West)					GA-6 Thornton Rd (East)					
	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	
0600 - 0615	13	37	34	0	84	14	23	3	0	40	2	217	25	0	244	19	106	19	0	144	512
0615 - 0630	26	46	45	0	117	35	39	1	0	75	3	278	21	0	302	23	121	10	0	154	648
0630 - 0645	46	49	55	0	150	45	53	2	0	100	0	279	32	0	311	26	122	30	0	178	739
0645 - 0700	33	74	80	0	187	37	63	1	0	101	3	323	28	0	354	25	164	42	0	231	873
Hourly Total	118	206	214	0	538	131	178	7	0	316	8	1097	106	0	1211	93	513	101	0	707	2772
0700 - 0715	26	77	69	0	172	26	42	1	0	69	2	321	17	0	340	21	189	38	0	248	829
0715 - 0730	28	64	64	0	156	27	35	1	0	63	4	240	23	1	268	19	178	49	0	246	733
0730 - 0745	31	71	63	0	165	31	46	1	0	78	1	274	25	0	300	22	165	36	0	223	766
0745 - 0800	20	61	51	0	132	45	53	2	0	100	1	268	27	0	296	24	187	50	1	262	790
Hourly Total	105	273	247	0	625	129	176	5	0	310	8	1103	92	1	1204	86	719	173	1	979	3118
0800 - 0815	27	61	50	0	138	20	54	0	0	74	2	243	16	0	261	28	150	29	0	207	680
0815 - 0830	27	52	50	0	129	41	49	2	0	92	2	200	13	1	216	23	145	30	0	198	635
0830 - 0845	28	68	37	0	133	22	48	1	0	71	3	228	13	0	244	22	140	24	0	186	634
0845 - 0900	19	35	52	0	106	14	39	5	0	58	2	214	30	0	246	21	148	23	1	193	603
Hourly Total	101	216	189	0	506	97	190	8	0	295	9	885	72	1	967	94	583	106	1	784	2552
Grand Total	324	695	650	0	1669	357	544	20	0	921	25	3085	270	2	3382	273	1815	380	2	2470	8442
Approach %	19.41	41.64	38.95	0.00	-	38.76	59.07	2.17	0.00	-	0.74	91.22	7.98	0.06	-	11.05	73.48	15.38	0.08	-	-
Intersection %	3.84	8.23	7.70	0.00	19.77	4.23	6.44	0.24	0.00	10.91	0.30	36.54	3.20	0.02	40.06	3.23	21.50	4.50	0.02	29.26	-

1600 - 1900 (Weekday 3h Session) (05-23-2023)

Passenger Vehicles (1-3)

TIME	Northbound					Southbound					Eastbound					Westbound					Int
	Riverside Pkwy (South)					Riverside Pkwy (North)					GA-6 Thornton Rd (West)					GA-6 Thornton Rd (East)					
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	
1600 - 1615	33	38	47	0	118	32	43	3	0	78	3	178	48	0	229	40	252	39	0	331	756
1615 - 1630	31	39	38	0	108	27	68	3	0	98	1	182	45	0	228	39	288	62	0	389	823
1630 - 1645	35	43	33	0	111	41	55	4	0	100	3	192	35	0	230	54	289	40	1	384	825
1645 - 1700	23	43	30	0	96	27	73	1	0	101	2	177	43	0	222	59	251	40	0	350	769
Hourly Total	122	163	148	0	433	127	239	11	0	377	9	729	171	0	909	192	1080	181	1	1454	3173
1700 - 1715	34	57	49	0	140	39	75	1	0	115	3	183	52	0	238	61	274	48	0	383	876
1715 - 1730	23	51	41	0	115	33	90	6	0	129	3	206	68	0	277	54	303	45	2	404	925
1730 - 1745	29	41	32	0	102	19	74	4	0	97	2	157	65	0	224	67	252	37	1	357	780
1745 - 1800	24	48	42	0	114	21	70	0	0	91	2	212	51	0	265	51	288	44	0	383	853
Hourly Total	110	197	164	0	471	112	309	11	0	432	10	758	236	0	1004	233	1117	174	3	1527	3434
1800 - 1815	33	58	39	0	130	24	48	2	0	74	2	160	40	0	202	37	204	25	0	266	672
1815 - 1830	37	52	35	0	124	22	58	3	0	83	2	189	38	0	229	44	250	27	0	321	757
1830 - 1845	45	35	42	0	122	23	53	2	0	78	0	141	36	0	177	36	241	14	0	291	668
1845 - 1900	32	35	33	0	100	18	29	2	0	49	0	132	35	0	167	30	179	28	0	237	553
Hourly Total	147	180	149	0	476	87	188	9	0	284	4	622	149	0	775	147	874	94	0	1115	2650
Grand Total	379	540	461	0	1380	326	736	31	0	1093	23	2109	556	0	2688	572	3071	449	4	4096	9257
Approach %	27.46	39.13	33.41	0.00	-	29.83	67.34	2.84	0.00	-	0.86	78.46	20.68	0.00	-	13.96	74.98	10.96	0.10	-	
Intersection %	4.09	5.83	4.98	0.00	14.91	3.52	7.95	0.33	0.00	11.81	0.25	22.78	6.01	0.00	29.04	6.18	33.17	4.85	0.04	44.25	

Classified Turn Movement Count || Single Unit Trucks (4-7)

Douglasville, GA



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Site 3 of 3

Riverside Pkwy (South)
Riverside Pkwy (North)
GA-6 Thornton Rd (West)
GA-6 Thornton Rd (East)

Date

Tuesday, May 23, 2023

Lat/Long

33.740064°, -84.586080°

Weather

Cloudy
67°F

0600 - 0900 (Weekday 3h Session) (05-23-2023)

Single Unit Trucks (4-7)

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	Riverside Pkwy (South)					Riverside Pkwy (North)					GA-6 Thornton Rd (West)					GA-6 Thornton Rd (East)					
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	
0600 - 0615	1	0	1	0	2	0	2	1	0	3	0	6	1	0	7	1	6	1	0	8	20
0615 - 0630	1	1	1	0	3	4	3	0	0	7	0	4	0	0	4	0	9	1	0	10	24
0630 - 0645	0	0	1	0	1	8	2	0	0	10	0	11	0	0	11	0	5	1	0	6	28
0645 - 0700	0	0	1	0	1	1	6	0	0	7	1	6	0	0	7	0	14	1	0	15	30
Hourly Total	2	1	4	0	7	13	13	1	0	27	1	27	1	0	29	1	34	4	0	39	102
0700 - 0715	0	0	3	0	3	3	0	0	0	3	1	14	2	0	17	3	12	3	0	18	41
0715 - 0730	1	1	3	0	5	7	2	0	0	9	0	20	0	0	20	2	9	2	0	13	47
0730 - 0745	1	4	5	0	10	2	4	0	0	6	0	13	0	0	13	2	11	3	0	16	45
0745 - 0800	0	2	4	0	6	4	0	0	0	4	0	5	0	0	5	2	19	2	0	23	38
Hourly Total	2	7	15	0	24	16	6	0	0	22	1	52	2	0	55	9	51	10	0	70	171
0800 - 0815	1	5	1	0	7	5	0	0	0	5	1	21	2	0	24	1	14	4	0	19	55
0815 - 0830	2	3	1	0	6	9	1	1	0	11	0	14	2	0	16	0	12	1	0	13	46
0830 - 0845	2	2	1	0	5	6	0	0	0	6	1	17	2	0	20	0	14	3	0	17	48
0845 - 0900	1	1	1	0	3	5	0	0	0	5	0	17	2	0	19	2	13	0	0	15	42
Hourly Total	6	11	4	0	21	25	1	1	0	27	2	69	8	0	79	3	53	8	0	64	191
Grand Total	10	19	23	0	52	54	20	2	0	76	4	148	11	0	163	13	138	22	0	173	464
Approach %	19.23	36.54	44.23	0.00	-	71.05	26.32	2.63	0.00	-	2.45	90.80	6.75	0.00	-	7.51	79.77	12.72	0.00	-	
Intersection %	2.16	4.09	4.96	0.00	11.21	11.64	4.31	0.43	0.00	16.38	0.86	31.90	2.37	0.00	35.13	2.80	29.74	4.74	0.00	37.28	

1600 - 1900 (Weekday 3h Session) (05-23-2023)

Single Unit Trucks (4-7)

	Northbound					Southbound					Eastbound					Westbound					Int Total
	Riverside Pkwy (South)					Riverside Pkwy (North)					GA-6 Thornton Rd (West)					GA-6 Thornton Rd (East)					
TIME	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	
1600 - 1615	1	3	0	0	4	4	2	0	0	6	1	13	2	0	16	0	12	10	0	22	48
1615 - 1630	1	1	0	0	2	3	2	0	0	5	0	21	1	0	22	0	16	3	0	19	48
1630 - 1645	1	2	0	0	3	3	1	1	0	5	0	12	0	0	12	0	13	3	0	16	36
1645 - 1700	2	0	0	0	2	3	2	1	0	6	0	13	3	0	16	2	12	2	0	16	40
Hourly Total	5	6	0	0	11	13	7	2	0	22	1	59	6	0	66	2	53	18	0	73	172
1700 - 1715	0	3	0	0	3	3	1	1	0	5	0	13	1	0	14	0	10	5	0	15	37
1715 - 1730	1	0	0	0	1	0	0	0	0	0	0	10	2	0	12	0	11	1	0	12	25
1730 - 1745	2	0	0	0	2	0	1	0	0	1	0	8	0	0	8	0	10	4	0	14	25
1745 - 1800	1	1	0	0	2	0	3	0	0	3	0	8	4	0	12	1	2	2	0	5	22
Hourly Total	4	4	0	0	8	3	5	1	0	9	0	39	7	0	46	1	33	12	0	46	109
1800 - 1815	1	0	1	0	2	1	0	0	0	1	0	11	3	0	14	1	9	1	0	11	28
1815 - 1830	0	0	2	0	2	1	0	0	0	1	0	9	2	0	11	0	8	6	0	14	28
1830 - 1845	1	0	1	0	2	2	2	0	0	4	0	4	0	0	4	0	12	3	0	15	25
1845 - 1900	1	0	3	0	4	0	0	0	0	0	0	9	0	0	9	0	6	0	0	6	19
Hourly Total	3	0	7	0	10	4	2	0	0	6	0	33	5	0	38	1	35	10	0	46	100
Grand Total	12	10	7	0	29	20	14	3	0	37	1	131	18	0	150	4	121	40	0	165	381
Approach %	41.38	34.48	24.14	0.00	-	54.05	37.84	8.11	0.00	-	0.67	87.33	12.00	0.00	-	2.42	73.33	24.24	0.00	-	
Intersection %	3.15	2.62	1.84	0.00	7.61	5.25	3.67	0.79	0.00	9.71	0.26	34.38	4.72	0.00	39.37	1.05	31.76	10.50	0.00	43.31	

Classified Turn Movement Count || Combination Trucks (8-13)

Douglasville, GA



Marr Traffic
DATA COLLECTION

www.marrtraffic.com

Site 3 of 3

Riverside Pkwy (South)
Riverside Pkwy (North)
GA-6 Thornton Rd (West)
GA-6 Thornton Rd (East)

Date

Tuesday, May 23, 2023

Lat/Long

33.740064°, -84.586080°

Weather

Cloudy
67°F

0600 - 0900 (Weekday 3h Session) (05-23-2023)

Combination Trucks (8-13)

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	Riverside Pkwy (South)					Riverside Pkwy (North)					GA-6 Thornton Rd (West)					GA-6 Thornton Rd (East)					
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	
0600 - 0615	0	0	0	0	0	1	0	0	0	1	0	11	1	0	12	1	10	5	0	16	29
0615 - 0630	0	0	0	0	0	1	0	0	0	1	2	15	1	0	18	0	7	1	0	8	27
0630 - 0645	0	0	0	0	0	1	0	0	0	1	0	9	1	0	10	0	4	4	0	8	19
0645 - 0700	1	0	0	0	1	0	0	0	0	0	1	14	0	0	15	0	9	4	0	13	29
Hourly Total	1	0	0	0	1	3	0	0	0	3	3	49	3	0	55	1	30	14	0	45	104
0700 - 0715	0	0	2	0	2	3	2	0	0	5	0	11	0	0	11	0	16	3	0	19	37
0715 - 0730	0	0	2	0	2	1	2	1	0	4	0	21	0	0	21	0	12	2	0	14	41
0730 - 0745	0	0	2	0	2	12	3	0	0	15	0	9	0	0	9	0	12	2	0	14	40
0745 - 0800	0	2	3	0	5	2	3	1	0	6	1	25	0	0	26	0	18	3	0	21	58
Hourly Total	0	2	9	0	11	18	10	2	0	30	1	66	0	0	67	0	58	10	0	68	176
0800 - 0815	0	1	0	0	1	7	1	0	0	8	1	19	0	0	20	0	12	4	0	16	45
0815 - 0830	0	3	0	0	3	5	1	1	0	7	0	32	0	0	32	0	10	2	0	12	54
0830 - 0845	0	0	0	0	0	5	2	1	0	8	2	29	0	0	31	0	16	9	0	25	64
0845 - 0900	1	3	0	0	4	2	3	1	0	6	0	33	0	0	33	0	18	1	0	19	62
Hourly Total	1	7	0	0	8	19	7	3	0	29	3	113	0	0	116	0	56	16	0	72	225
Grand Total	2	9	9	0	20	40	17	5	0	62	7	228	3	0	238	1	144	40	0	185	505
Approach %	10.00	45.00	45.00	0.00	-	64.52	27.42	8.06	0.00	-	2.94	95.80	1.26	0.00	-	0.54	77.84	21.62	0.00	-	
Intersection %	0.40	1.78	1.78	0.00	3.96	7.92	3.37	0.99	0.00	12.28	1.39	45.15	0.59	0.00	47.13	0.20	28.51	7.92	0.00	36.63	

1600 - 1900 (Weekday 3h Session) (05-23-2023)

Combination Trucks (8-13)

	Northbound					Southbound					Eastbound					Westbound					Int Total
	Riverside Pkwy (South)					Riverside Pkwy (North)					GA-6 Thornton Rd (West)					GA-6 Thornton Rd (East)					
TIME	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	Int Total
1600 - 1615	3	4	0	0	7	1	2	0	0	3	1	20	0	0	21	0	13	4	0	17	48
1615 - 1630	2	0	0	0	2	3	3	0	0	6	1	13	0	0	14	0	19	7	0	26	48
1630 - 1645	1	2	0	0	3	5	4	0	0	9	0	14	0	0	14	0	17	6	0	23	49
1645 - 1700	1	2	0	0	3	2	0	1	0	3	2	0	1	0	3	0	16	11	0	27	36
Hourly Total	7	8	0	0	15	11	9	1	0	21	4	47	1	0	52	0	65	28	0	93	181
1700 - 1715	3	1	1	0	5	2	4	1	0	7	0	19	0	0	19	0	23	2	0	25	56
1715 - 1730	2	1	1	0	4	2	1	0	0	3	0	18	0	0	18	0	15	7	0	22	47
1730 - 1745	2	2	1	0	5	2	1	0	0	3	2	24	0	0	26	0	18	10	0	28	62
1745 - 1800	1	2	0	0	3	2	2	0	0	4	1	14	0	0	15	0	13	6	0	19	41
Hourly Total	8	6	3	0	17	8	8	1	0	17	3	75	0	0	78	0	69	25	0	94	206
1800 - 1815	5	0	2	0	7	4	2	0	0	6	0	21	0	0	21	0	16	8	0	24	58
1815 - 1830	2	0	2	0	4	1	0	0	0	1	0	7	0	0	7	0	13	5	0	18	30
1830 - 1845	2	0	0	0	2	5	3	0	0	8	1	10	0	0	11	0	14	5	0	19	40
1845 - 1900	2	0	0	0	2	2	1	0	0	3	1	19	0	0	20	0	11	4	0	15	40
Hourly Total	11	0	4	0	15	12	6	0	0	18	2	57	0	0	59	0	54	22	0	76	168
Grand Total	26	14	7	0	47	31	23	2	0	56	9	179	1	0	189	0	188	75	0	263	555
Approach %	55.32	29.79	14.89	0.00	-	55.36	41.07	3.57	0.00	-	4.76	94.71	0.53	0.00	-	0.00	71.48	28.52	0.00	-	
Intersection %	4.68	2.52	1.26	0.00	8.47	5.59	4.14	0.36	0.00	10.09	1.62	32.25	0.18	0.00	34.05	0.00	33.87	13.51	0.00	47.39	

Appendix C: Existing Conditions Analysis Reports

HCM 6th Signalized Intersection Summary

1: Fairburn Rd (SR 92) & Riverside Pkwy

Vantage Data Center
Existing 2023

								
Movement	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations								
Traffic Volume (veh/h)	117	296	1	826	128	1	476	1500
Future Volume (veh/h)	117	296	1	826	128	1	476	1500
Initial Q (Qb), veh	0	0		0	0		0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00		1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00		1.00	1.00
Work Zone On Approach	No			No				No
Adj Sat Flow, veh/h/ln	1781	1811		1811	1767		1826	1826
Adj Flow Rate, veh/h	124	0		879	0		506	1596
Peak Hour Factor	0.94	0.94		0.94	0.94		0.94	0.94
Percent Heavy Veh, %	8	6		6	9		5	5
Cap, veh/h	150			2208			583	2794
Arrive On Green	0.09	0.00		0.64	0.00		0.12	0.81
Sat Flow, veh/h	1697	2701		3532	1497		1739	3561
Grp Volume(v), veh/h	124	0		879	0		506	1596
Grp Sat Flow(s),veh/h/ln	1697	1351		1721	1497		1739	1735
Q Serve(g_s), s	9.3	0.0		16.0	0.0		11.9	21.6
Cycle Q Clear(g_c), s	9.3	0.0		16.0	0.0		11.9	21.6
Prop In Lane	1.00	1.00			1.00		1.00	
Lane Grp Cap(c), veh/h	150			2208			583	2794
V/C Ratio(X)	0.83			0.40			0.87	0.57
Avail Cap(c_a), veh/h	261			2208			887	2794
HCM Platoon Ratio	1.00	1.00		1.00	1.00		1.00	1.00
Upstream Filter(I)	1.00	0.00		1.00	0.00		1.00	1.00
Uniform Delay (d), s/veh	58.3	0.0		11.2	0.0		11.3	4.6
Incr Delay (d2), s/veh	15.2	0.0		0.5	0.0		6.1	0.9
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0		0.0	0.0
%ile BackOfQ(95%),veh/ln	8.1	0.0		9.6	0.0		8.7	9.3
Unsig. Movement Delay, s/veh								
LnGrp Delay(d),s/veh	73.5	0.0		11.7	0.0		17.4	5.4
LnGrp LOS	E			B			B	A
Approach Vol, veh/h	124			879				2102
Approach Delay, s/veh	73.5			11.7				8.3
Approach LOS	E			B				A
Timer - Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	21.3	90.2		18.5		111.5		
Change Period (Y+Rc), s	* 5.7	6.8		7.0		6.8		
Max Green Setting (Gmax), s	* 38	52.2		20.0		96.2		
Max Q Clear Time (g_c+I1), s	13.9	18.0		11.3		23.6		
Green Ext Time (p_c), s	1.7	13.0		0.3		42.6		

Intersection Summary

HCM 6th Ctrl Delay	11.9
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	633	6	3	333	2	0
Future Vol, veh/h	633	6	3	333	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	5	17	0	8	50	0
Mvmt Flow	681	6	3	358	2	0

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	687	0	1048
Stage 1	-	-	-	-	684
Stage 2	-	-	-	-	364
Critical Hdwy	-	-	4.1	-	6.9
Critical Hdwy Stg 1	-	-	-	-	5.9
Critical Hdwy Stg 2	-	-	-	-	5.9
Follow-up Hdwy	-	-	2.2	-	3.95
Pot Cap-1 Maneuver	-	-	916	-	206
Stage 1	-	-	-	-	422
Stage 2	-	-	-	-	609
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	916	-	205
Mov Cap-2 Maneuver	-	-	-	-	205
Stage 1	-	-	-	-	422
Stage 2	-	-	-	-	607

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	22.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	205	-	-	916	-
HCM Lane V/C Ratio	0.01	-	-	0.004	-
HCM Control Delay (s)	22.7	-	-	8.9	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

HCM 6th Signalized Intersection Summary

3: Thornton Rd (SR 6) & Riverside Pkwy

Vantage Data Center
Existing 2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	291	294	150	205	5	94	791	185	13	1266	95
Future Volume (veh/h)	121	291	294	150	205	5	94	791	185	13	1266	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1811	1618	1767	1604	1796	1722	1737	1559	1767	1870
Adj Flow Rate, veh/h	129	310	0	160	218	0	100	841	0	14	1347	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	6	19	9	20	7	12	11	23	9	2
Cap, veh/h	255	339		175	330		238	1849		21	1465	
Arrive On Green	0.07	0.18	0.00	0.07	0.19	0.00	0.14	0.57	0.00	0.01	0.44	0.00
Sat Flow, veh/h	1781	1870	1535	1541	1767	1359	1711	3272	1472	1485	3357	1585
Grp Volume(v), veh/h	129	310	0	160	218	0	100	841	0	14	1347	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1535	1541	1767	1359	1711	1636	1472	1485	1678	1585
Q Serve(g_s), s	9.9	27.7	0.0	12.7	19.5	0.0	9.1	25.6	0.0	1.6	64.2	0.0
Cycle Q Clear(g_c), s	9.9	27.7	0.0	12.7	19.5	0.0	9.1	25.6	0.0	1.6	64.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	255	339		175	330		238	1849		21	1465	
V/C Ratio(X)	0.51	0.91		0.92	0.66		0.42	0.45		0.66	0.92	
Avail Cap(c_a), veh/h	432	442		175	330		238	1849		235	1465	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	52.2	68.3	0.0	58.1	64.1	0.0	66.9	21.6	0.0	83.4	45.1	0.0
Incr Delay (d2), s/veh	1.9	19.9	0.0	44.8	4.8	0.0	1.2	0.8	0.0	30.2	10.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.0	21.3	0.0	6.7	14.0	0.0	7.1	14.7	0.0	1.4	36.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.1	88.3	0.0	102.9	68.9	0.0	68.1	22.4	0.0	113.6	55.9	0.0
LnGrp LOS	D	F		F	E		E	C		F	E	
Approach Vol, veh/h	439			378			941			1361		
Approach Delay, s/veh	78.2			83.3			27.3			56.5		
Approach LOS	E			F			C			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.5	102.9	20.0	38.6	30.4	81.0	19.0	39.6				
Change Period (Y+Rc), s	6.1	6.8	7.3	* 7.8	6.8	* 6.8	* 6.8	* 7.8				
Max Green Setting (Gmax), s	26.9	62.2	12.7	* 40	14.9	* 74	* 29	* 24				
Max Q Clear Time (g_c+I1), s	3.6	27.6	14.7	29.7	11.1	66.2	11.9	21.5				
Green Ext Time (p_c), s	0.0	11.6	0.0	1.1	0.1	6.5	0.4	0.3				

Intersection Summary

HCM 6th Ctrl Delay	54.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

1: Fairburn Rd (SR 92) & Riverside Pkwy

Vantage Data Center
Existing 2023

							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	196	539	4	1597	38	215	1018
Future Volume (veh/h)	196	539	4	1597	38	215	1018
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1885	1856		1841	1781	1781	1841
Adj Flow Rate, veh/h	202	0		1646	0	222	1049
Peak Hour Factor	0.97	0.97		0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	3		4	8	8	4
Cap, veh/h	227			2370		261	2710
Arrive On Green	0.13	0.00		0.68	0.00	0.06	0.77
Sat Flow, veh/h	1795	2768		3589	1510	1697	3589
Grp Volume(v), veh/h	202	0		1646	0	222	1049
Grp Sat Flow(s),veh/h/ln	1795	1384		1749	1510	1697	1749
Q Serve(g_s), s	15.5	0.0		40.1	0.0	5.3	13.5
Cycle Q Clear(g_c), s	15.5	0.0		40.1	0.0	5.3	13.5
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	227			2370		261	2710
V/C Ratio(X)	0.89			0.69		0.85	0.39
Avail Cap(c_a), veh/h	256			2370		556	2710
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00		1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	60.2	0.0		13.7	0.0	24.6	5.1
Incr Delay (d2), s/veh	28.8	0.0		1.7	0.0	8.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.6	0.0		20.8	0.0	9.7	7.3
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	89.0	0.0		15.4	0.0	32.6	5.5
LnGrp LOS	F			B		C	A
Approach Vol, veh/h	202			1646			1271
Approach Delay, s/veh	89.0			15.4			10.2
Approach LOS	F			B			B
Timer - Assigned Phs	1	2		4		6	
Phs Duration (G+Y+Rc), s	13.6	101.7		24.7		115.3	
Change Period (Y+Rc), s	* 5.7	6.8		7.0		6.8	
Max Green Setting (Gmax), s	* 32	68.2		20.0		106.2	
Max Q Clear Time (g_c+I1), s	7.3	42.1		17.5		15.5	
Green Ext Time (p_c), s	0.6	21.1		0.2		21.8	

Intersection Summary

HCM 6th Ctrl Delay	18.1
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	278	1	0	738	2	0
Future Vol, veh/h	278	1	0	738	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	8	0	0	3	0	0
Mvmt Flow	284	1	0	753	2	0
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	285	0	1038	285
Stage 1	-	-	-	-	285	-
Stage 2	-	-	-	-	753	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1289	-	258	759
Stage 1	-	-	-	-	768	-
Stage 2	-	-	-	-	469	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1289	-	258	759
Mov Cap-2 Maneuver	-	-	-	-	258	-
Stage 1	-	-	-	-	768	-
Stage 2	-	-	-	-	469	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		19.1	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	258	-	-	1289	-	
HCM Lane V/C Ratio	0.008	-	-	-	-	
HCM Control Delay (s)	19.1	-	-	0	-	
HCM Lane LOS	C	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	

HCM 6th Signalized Intersection Summary

3: Thornton Rd (SR 6) & Riverside Pkwy

Vantage Data Center
Existing 2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	207	167	123	322	13	234	1219	211	13	872	243
Future Volume (veh/h)	122	207	167	123	322	13	234	1219	211	13	872	243
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1826	1870	1767	1841	1678	1900	1781	1633	1559	1707	1856
Adj Flow Rate, veh/h	130	220	0	131	343	0	249	1297	0	14	928	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	10	5	2	9	4	15	0	8	18	23	13	3
Cap, veh/h	176	356		256	363		390	1903		21	1157	
Arrive On Green	0.07	0.19	0.00	0.07	0.20	0.00	0.22	0.56	0.00	0.01	0.36	0.00
Sat Flow, veh/h	1668	1826	1585	1682	1841	1422	1810	3385	1384	1485	3244	1572
Grp Volume(v), veh/h	130	220	0	131	343	0	249	1297	0	14	928	0
Grp Sat Flow(s),veh/h/ln	1668	1826	1585	1682	1841	1422	1810	1692	1384	1485	1622	1572
Q Serve(g_s), s	11.1	19.9	0.0	11.1	33.1	0.0	22.5	48.9	0.0	1.7	46.4	0.0
Cycle Q Clear(g_c), s	11.1	19.9	0.0	11.1	33.1	0.0	22.5	48.9	0.0	1.7	46.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	176	356		256	363		390	1903		21	1157	
V/C Ratio(X)	0.74	0.62		0.51	0.95		0.64	0.68		0.67	0.80	
Avail Cap(c_a), veh/h	231	408		280	380		390	1903		73	1157	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	55.5	66.3	0.0	53.5	71.3	0.0	64.2	27.9	0.0	88.3	52.2	0.0
Incr Delay (d2), s/veh	9.5	2.2	0.0	1.6	31.7	0.0	3.4	2.0	0.0	31.8	5.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.8	14.4	0.0	8.4	25.7	0.0	15.9	26.5	0.0	1.5	26.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.0	68.6	0.0	55.1	103.0	0.0	67.6	29.9	0.0	120.2	58.1	0.0
LnGrp LOS	E	E		E	F		E	C		F	E	
Approach Vol, veh/h	350			474			1546			942		
Approach Delay, s/veh	67.2			89.8			36.0			59.0		
Approach LOS	E			F			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.6	108.0	20.5	42.9	45.6	71.0	20.1	43.3				
Change Period (Y+Rc), s	6.1	6.8	7.3	* 7.8	6.8	* 6.8	* 6.8	* 7.8				
Max Green Setting (Gmax), s	8.9	87.2	15.7	* 40	31.9	* 64	* 19	* 37				
Max Q Clear Time (g_c+I1), s	3.7	50.9	13.1	21.9	24.5	48.4	13.1	35.1				
Green Ext Time (p_c), s	0.0	20.3	0.1	1.0	0.4	8.5	0.2	0.4				

Intersection Summary

HCM 6th Ctrl Delay 53.5
HCM 6th LOS D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Appendix D: Projected Conditions Analysis Reports

HCM 6th Signalized Intersection Summary

1: Fairburn Rd (SR 92) & Riverside Pkwy

05/23/2023 7:00 AM

Background 2023

								
Movement	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations								
Traffic Volume (veh/h)	122	309	1	863	134	1	497	1567
Future Volume (veh/h)	122	309	1	863	134	1	497	1567
Initial Q (Qb), veh	0	0		0	0		0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00		1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00		1.00	1.00
Work Zone On Approach	No			No				No
Adj Sat Flow, veh/h/ln	1781	1811		1811	1767		1826	1826
Adj Flow Rate, veh/h	130	0		918	0		529	1667
Peak Hour Factor	0.94	0.94		0.94	0.94		0.94	0.94
Percent Heavy Veh, %	8	6		6	9		5	5
Cap, veh/h	156			2167			572	2781
Arrive On Green	0.09	0.00		0.63	0.00		0.13	0.80
Sat Flow, veh/h	1697	2701		3532	1497		1739	3561
Grp Volume(v), veh/h	130	0		918	0		529	1667
Grp Sat Flow(s),veh/h/ln	1697	1351		1721	1497		1739	1735
Q Serve(g_s), s	9.8	0.0		17.5	0.0		12.9	23.8
Cycle Q Clear(g_c), s	9.8	0.0		17.5	0.0		12.9	23.8
Prop In Lane	1.00	1.00			1.00		1.00	
Lane Grp Cap(c), veh/h	156			2167			572	2781
V/C Ratio(X)	0.83			0.42			0.92	0.60
Avail Cap(c_a), veh/h	261			2167			862	2781
HCM Platoon Ratio	1.00	1.00		1.00	1.00		1.00	1.00
Upstream Filter(I)	1.00	0.00		1.00	0.00		1.00	1.00
Uniform Delay (d), s/veh	58.0	0.0		12.1	0.0		14.0	4.9
Incr Delay (d2), s/veh	15.1	0.0		0.6	0.0		11.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0		0.0	0.0
%ile BackOfQ(95%),veh/ln	8.4	0.0		10.4	0.0		16.4	10.2
Unsig. Movement Delay, s/veh								
LnGrp Delay(d),s/veh	73.2	0.0		12.8	0.0		25.5	5.9
LnGrp LOS	E			B			C	A
Approach Vol, veh/h	130			918				2196
Approach Delay, s/veh	73.2			12.8				10.6
Approach LOS	E			B				B
Timer - Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	22.3	88.7		19.0		111.0		
Change Period (Y+Rc), s	* 5.7	6.8		7.0		6.8		
Max Green Setting (Gmax), s	* 38	52.2		20.0		96.2		
Max Q Clear Time (g_c+I1), s	14.9	19.5		11.8		25.8		
Green Ext Time (p_c), s	1.8	13.5		0.3		44.7		

Intersection Summary

HCM 6th Ctrl Delay	13.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	661	6	3	348	2	0
Future Vol, veh/h	661	6	3	348	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	5	17	0	8	50	0
Mvmt Flow	711	6	3	374	2	0
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	717	0	1094	714
Stage 1	-	-	-	-	714	-
Stage 2	-	-	-	-	380	-
Critical Hdwy	-	-	4.1	-	6.9	6.2
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	-	-	2.2	-	3.95	3.3
Pot Cap-1 Maneuver	-	-	893	-	192	435
Stage 1	-	-	-	-	408	-
Stage 2	-	-	-	-	598	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	893	-	191	435
Mov Cap-2 Maneuver	-	-	-	-	191	-
Stage 1	-	-	-	-	408	-
Stage 2	-	-	-	-	596	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		24.1	
HCM LOS	C					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	191	-	-	893	-	
HCM Lane V/C Ratio	0.011	-	-	0.004	-	
HCM Control Delay (s)	24.1	-	-	9	0	
HCM Lane LOS	C	-	-	A	A	
HCM 95th %tile Q(veh)	0	-	-	0	-	

HCM 6th Signalized Intersection Summary

3: Thornton Rd (SR 6) & Riverside Pkwy

05/23/2023 7:00 AM

Background 2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	304	307	157	214	5	98	826	193	14	1322	99
Future Volume (veh/h)	126	304	307	157	214	5	98	826	193	14	1322	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1811	1618	1767	1604	1796	1722	1737	1559	1767	1870
Adj Flow Rate, veh/h	134	323	0	167	228	0	104	879	0	15	1406	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	6	19	9	20	7	12	11	23	9	2
Cap, veh/h	257	351		174	339		226	1825		22	1465	
Arrive On Green	0.07	0.19	0.00	0.07	0.19	0.00	0.13	0.56	0.00	0.01	0.44	0.00
Sat Flow, veh/h	1781	1870	1535	1541	1767	1359	1711	3272	1472	1485	3357	1585
Grp Volume(v), veh/h	134	323	0	167	228	0	104	879	0	15	1406	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1535	1541	1767	1359	1711	1636	1472	1485	1678	1585
Q Serve(g_s), s	10.2	28.8	0.0	12.7	20.4	0.0	9.6	27.6	0.0	1.7	69.1	0.0
Cycle Q Clear(g_c), s	10.2	28.8	0.0	12.7	20.4	0.0	9.6	27.6	0.0	1.7	69.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	257	351		174	339		226	1825		22	1465	
V/C Ratio(X)	0.52	0.92		0.96	0.67		0.46	0.48		0.68	0.96	
Avail Cap(c_a), veh/h	431	442		174	339		226	1825		235	1465	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	51.4	67.8	0.0	58.4	63.8	0.0	68.2	22.7	0.0	83.3	46.4	0.0
Incr Delay (d2), s/veh	2.0	21.2	0.0	55.8	5.2	0.0	1.5	0.9	0.0	30.4	15.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.2	22.1	0.0	8.1	14.6	0.0	7.5	15.7	0.0	1.5	39.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.4	89.0	0.0	114.2	68.9	0.0	69.6	23.6	0.0	113.7	62.1	0.0
LnGrp LOS	D	F		F	E		E	C		F	E	
Approach Vol, veh/h	457			395			983			1421		
Approach Delay, s/veh	78.5			88.1			28.5			62.7		
Approach LOS	E			F			C			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.6	101.6	20.0	39.7	29.3	81.0	19.4	40.4				
Change Period (Y+Rc), s	6.1	6.8	7.3	* 7.8	6.8	* 6.8	* 6.8	* 7.8				
Max Green Setting (Gmax), s	26.9	62.2	12.7	* 40	14.9	* 74	* 29	* 24				
Max Q Clear Time (g_c+I1), s	3.7	29.6	14.7	30.8	11.6	71.1	12.2	22.4				
Green Ext Time (p_c), s	0.0	11.9	0.0	1.1	0.1	2.8	0.4	0.2				

Intersection Summary

HCM 6th Ctrl Delay 57.7

HCM 6th LOS E

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

1: Fairburn Rd (SR 92) & Riverside Pkwy

Vantage Data Center
Background 2023

							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	205	563	4	1668	40	225	1063
Future Volume (veh/h)	205	563	4	1668	40	225	1063
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1885	1856		1841	1781	1781	1841
Adj Flow Rate, veh/h	211	0		1720	0	232	1096
Peak Hour Factor	0.97	0.97		0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	3		4	8	8	4
Cap, veh/h	235			2305		260	2694
Arrive On Green	0.13	0.00		0.66	0.00	0.07	0.77
Sat Flow, veh/h	1795	2768		3589	1510	1697	3589
Grp Volume(v), veh/h	211	0		1720	0	232	1096
Grp Sat Flow(s),veh/h/ln	1795	1384		1749	1510	1697	1749
Q Serve(g_s), s	16.2	0.0		46.2	0.0	7.2	14.7
Cycle Q Clear(g_c), s	16.2	0.0		46.2	0.0	7.2	14.7
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	235			2305		260	2694
V/C Ratio(X)	0.90			0.75		0.89	0.41
Avail Cap(c_a), veh/h	256			2305		532	2694
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00		1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	59.9	0.0		16.0	0.0	31.2	5.4
Incr Delay (d2), s/veh	30.4	0.0		2.3	0.0	10.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.2	0.0		23.9	0.0	10.0	7.9
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	90.3	0.0		18.3	0.0	41.9	5.8
LnGrp LOS	F			B		D	A
Approach Vol, veh/h	211			1720			1328
Approach Delay, s/veh	90.3			18.3			12.1
Approach LOS	F			B			B
Timer - Assigned Phs	1	2		4		6	
Phs Duration (G+Y+Rc), s	15.6	99.1		25.4		114.6	
Change Period (Y+Rc), s	* 5.7	6.8		7.0		6.8	
Max Green Setting (Gmax), s	* 32	68.2		20.0		106.2	
Max Q Clear Time (g_c+I1), s	9.2	48.2		18.2		16.7	
Green Ext Time (p_c), s	0.7	17.3		0.2		23.5	

Intersection Summary

HCM 6th Ctrl Delay	20.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	290	1	0	771	2	0
Future Vol, veh/h	290	1	0	771	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	8	0	0	3	0	0
Mvmt Flow	296	1	0	787	2	0
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	297	0	1084	297
Stage 1	-	-	-	-	297	-
Stage 2	-	-	-	-	787	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1276	-	242	747
Stage 1	-	-	-	-	758	-
Stage 2	-	-	-	-	452	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1276	-	242	747
Mov Cap-2 Maneuver	-	-	-	-	242	-
Stage 1	-	-	-	-	758	-
Stage 2	-	-	-	-	452	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		20	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	242	-	-	1276	-	
HCM Lane V/C Ratio	0.008	-	-	-	-	
HCM Control Delay (s)	20	-	-	0	-	
HCM Lane LOS	C	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	

HCM 6th Signalized Intersection Summary

3: Thornton Rd (SR 6) & Riverside Pkwy

Vantage Data Center
Background 2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	216	174	128	336	14	244	1273	220	14	911	254
Future Volume (veh/h)	127	216	174	128	336	14	244	1273	220	14	911	254
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1826	1870	1767	1841	1678	1900	1781	1633	1559	1707	1856
Adj Flow Rate, veh/h	135	230	0	136	357	0	260	1354	0	15	969	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	10	5	2	9	4	15	0	8	18	23	13	3
Cap, veh/h	178	368		260	375		375	1873		22	1157	
Arrive On Green	0.08	0.20	0.00	0.08	0.20	0.00	0.21	0.55	0.00	0.01	0.36	0.00
Sat Flow, veh/h	1668	1826	1585	1682	1841	1422	1810	3385	1384	1485	3244	1572
Grp Volume(v), veh/h	135	230	0	136	357	0	260	1354	0	15	969	0
Grp Sat Flow(s),veh/h/ln	1668	1826	1585	1682	1841	1422	1810	1692	1384	1485	1622	1572
Q Serve(g_s), s	11.5	20.7	0.0	11.5	34.5	0.0	23.9	53.6	0.0	1.8	49.3	0.0
Cycle Q Clear(g_c), s	11.5	20.7	0.0	11.5	34.5	0.0	23.9	53.6	0.0	1.8	49.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	178	368		260	375		375	1873		22	1157	
V/C Ratio(X)	0.76	0.63		0.52	0.95		0.69	0.72		0.69	0.84	
Avail Cap(c_a), veh/h	229	408		281	380		375	1873		73	1157	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	54.7	65.7	0.0	52.6	70.8	0.0	66.0	29.9	0.0	88.3	53.1	0.0
Incr Delay (d2), s/veh	11.4	2.5	0.0	1.6	33.8	0.0	5.4	2.5	0.0	32.2	7.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.1	15.0	0.0	8.6	26.8	0.0	16.9	28.9	0.0	1.6	28.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.1	68.2	0.0	54.3	104.6	0.0	71.4	32.4	0.0	120.5	60.4	0.0
LnGrp LOS	E	E		D	F		E	C		F	E	
Approach Vol, veh/h	365			493			1614			984		
Approach Delay, s/veh	67.4			90.7			38.7			61.3		
Approach LOS	E			F			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.7	106.4	20.8	44.1	44.1	71.0	20.4	44.4				
Change Period (Y+Rc), s	6.1	6.8	7.3	* 7.8	6.8	* 6.8	* 6.8	* 7.8				
Max Green Setting (Gmax), s	8.9	87.2	15.7	* 40	31.9	* 64	* 19	* 37				
Max Q Clear Time (g_c+I1), s	3.8	55.6	13.5	22.7	25.9	51.3	13.5	36.5				
Green Ext Time (p_c), s	0.0	19.6	0.1	1.0	0.4	7.7	0.2	0.1				

Intersection Summary

HCM 6th Ctrl Delay 55.6
HCM 6th LOS E

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

1: Fairburn Rd (SR 92) & Riverside Pkwy

Vantage Data Center

Build 2025

								
Movement	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations								
Traffic Volume (veh/h)	150	337	1	863	169	1	532	1567
Future Volume (veh/h)	150	337	1	863	169	1	532	1567
Initial Q (Qb), veh	0	0		0	0		0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00		1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00		1.00	1.00
Work Zone On Approach	No			No				No
Adj Sat Flow, veh/h/ln	1781	1811		1811	1767		1826	1826
Adj Flow Rate, veh/h	160	0		918	0		566	1667
Peak Hour Factor	0.94	0.94		0.94	0.94		0.94	0.94
Percent Heavy Veh, %	8	6		6	9		5	5
Cap, veh/h	187			1947			600	2719
Arrive On Green	0.11	0.00		0.57	0.00		0.17	0.78
Sat Flow, veh/h	1697	2701		3532	1497		1739	3561
Grp Volume(v), veh/h	160	0		918	0		566	1667
Grp Sat Flow(s),veh/h/ln	1697	1351		1721	1497		1739	1735
Q Serve(g_s), s	12.0	0.0		20.5	0.0		18.8	26.0
Cycle Q Clear(g_c), s	12.0	0.0		20.5	0.0		18.8	26.0
Prop In Lane	1.00	1.00			1.00		1.00	
Lane Grp Cap(c), veh/h	187			1947			600	2719
V/C Ratio(X)	0.86			0.47			0.94	0.61
Avail Cap(c_a), veh/h	261			1947			810	2719
HCM Platoon Ratio	1.00	1.00		1.00	1.00		1.00	1.00
Upstream Filter(I)	1.00	0.00		1.00	0.00		1.00	1.00
Uniform Delay (d), s/veh	56.8	0.0		16.7	0.0		19.1	5.8
Incr Delay (d2), s/veh	20.6	0.0		0.8	0.0		16.2	1.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0		0.0	0.0
%ile BackOfQ(95%),veh/ln	10.2	0.0		12.4	0.0		18.4	11.7
Unsig. Movement Delay, s/veh								
LnGrp Delay(d),s/veh	77.5	0.0		17.5	0.0		35.2	6.9
LnGrp LOS	E			B			D	A
Approach Vol, veh/h				918				2233
Approach Delay, s/veh				17.5				14.1
Approach LOS	E			B				B
Timer - Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	28.3	80.4		21.3		108.7		
Change Period (Y+Rc), s	* 5.7	6.8		7.0		6.8		
Max Green Setting (Gmax), s	* 38	52.2		20.0		96.2		
Max Q Clear Time (g_c+I1), s	20.8	22.5		14.0		28.0		
Green Ext Time (p_c), s	1.8	12.9		0.3		43.8		

Intersection Summary

HCM 6th Ctrl Delay	18.1
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection						
Int Delay, s/veh	3.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	661	76	49	348	58	38
Future Vol, veh/h	661	76	49	348	58	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	5	17	0	8	50	0
Mvmt Flow	711	82	53	374	62	41
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	793	0	1232	752
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	480	-
Critical Hdwy	-	-	4.1	-	6.9	6.2
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	-	-	2.2	-	3.95	3.3
Pot Cap-1 Maneuver	-	-	837	-	157	413
Stage 1	-	-	-	-	390	-
Stage 2	-	-	-	-	534	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	837	-	144	413
Mov Cap-2 Maneuver	-	-	-	-	144	-
Stage 1	-	-	-	-	390	-
Stage 2	-	-	-	-	491	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.2		42.9	
HCM LOS					E	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	194	-	-	837	-	
HCM Lane V/C Ratio	0.532	-	-	0.063	-	
HCM Control Delay (s)	42.9	-	-	9.6	0	
HCM Lane LOS	E	-	-	A	A	
HCM 95th %tile Q(veh)	2.7	-	-	0.2	-	

HCM 6th Signalized Intersection Summary

3: Thornton Rd (SR 6) & Riverside Pkwy

Vantage Data Center

Build 2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	145	304	326	157	214	5	121	826	193	14	1322	122
Future Volume (veh/h)	145	304	326	157	214	5	121	826	193	14	1322	122
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1811	1618	1767	1604	1796	1722	1737	1559	1767	1870
Adj Flow Rate, veh/h	154	323	0	167	228	0	129	879	0	15	1406	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	6	19	9	20	7	12	11	23	9	2
Cap, veh/h	261	351		174	321		147	1825		22	1633	
Arrive On Green	0.08	0.19	0.00	0.07	0.18	0.00	0.09	0.56	0.00	0.01	0.49	0.00
Sat Flow, veh/h	1781	1870	1535	1541	1767	1359	1711	3272	1472	1485	3357	1585
Grp Volume(v), veh/h	154	323	0	167	228	0	129	879	0	15	1406	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1535	1541	1767	1359	1711	1636	1472	1485	1678	1585
Q Serve(g_s), s	11.8	28.8	0.0	12.7	20.6	0.0	12.7	27.6	0.0	1.7	62.9	0.0
Cycle Q Clear(g_c), s	11.8	28.8	0.0	12.7	20.6	0.0	12.7	27.6	0.0	1.7	62.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	261	351		174	321		147	1825		22	1633	
V/C Ratio(X)	0.59	0.92		0.96	0.71		0.88	0.48		0.68	0.86	
Avail Cap(c_a), veh/h	418	442		174	321		150	1825		235	1633	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	51.6	67.8	0.0	59.1	65.3	0.0	76.8	22.7	0.0	83.3	38.6	0.0
Incr Delay (d2), s/veh	2.5	21.2	0.0	55.8	7.1	0.0	39.4	0.9	0.0	30.4	6.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.2	22.1	0.0	8.1	15.0	0.0	11.4	15.7	0.0	1.5	34.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.2	89.0	0.0	114.9	72.4	0.0	116.2	23.6	0.0	113.7	44.8	0.0
LnGrp LOS	D	F		F	E		F	C		F	D	
Approach Vol, veh/h	477				395				1008		1421	
Approach Delay, s/veh	77.7				90.4				35.5		45.5	
Approach LOS	E				F				D		D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.6	101.6	20.0	39.7	20.7	89.5	21.0	38.7				
Change Period (Y+Rc), s	6.1	6.8	7.3	* 7.8	6.1	6.8	* 6.8	* 7.8				
Max Green Setting (Gmax), s	26.9	62.2	12.7	* 40	14.9	74.2	* 29	* 24				
Max Q Clear Time (g_c+I1), s	3.7	29.6	14.7	30.8	14.7	64.9	13.8	22.6				
Green Ext Time (p_c), s	0.0	11.9	0.0	1.1	0.0	7.6	0.4	0.2				

Intersection Summary

HCM 6th Ctrl Delay 52.5

HCM 6th LOS D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection						
Int Delay, s/veh	3.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	38	56	0	46	70
Future Vol, veh/h	0	38	56	0	46	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	85	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	41	61	0	50	76
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	237	61	0	0	61	0
Stage 1	61	-	-	-	-	-
Stage 2	176	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	751	1004	-	-	1542	-
Stage 1	962	-	-	-	-	-
Stage 2	855	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	727	1004	-	-	1542	-
Mov Cap-2 Maneuver	727	-	-	-	-	-
Stage 1	962	-	-	-	-	-
Stage 2	828	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.7	0		2.9		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 1004		1542	-	
HCM Lane V/C Ratio	-	- 0.041		0.032	-	
HCM Control Delay (s)	-	- 8.7		7.4	-	
HCM Lane LOS	-	- A		A	-	
HCM 95th %tile Q(veh)	-	- 0.1		0.1	-	

Intersection						
Int Delay, s/veh	4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	28	28	0	35	35
Future Vol, veh/h	0	28	28	0	35	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	30	30	0	38	38
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	144	30	0	0	30	0
Stage 1	30	-	-	-	-	-
Stage 2	114	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	849	1044	-	-	1583	-
Stage 1	993	-	-	-	-	-
Stage 2	911	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	828	1044	-	-	1583	-
Mov Cap-2 Maneuver	828	-	-	-	-	-
Stage 1	993	-	-	-	-	-
Stage 2	888	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.6	0		3.7		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 1044		1583	-	
HCM Lane V/C Ratio	-	- 0.029		0.024	-	
HCM Control Delay (s)	-	- 8.6		7.3	0	
HCM Lane LOS	-	- A		A	A	
HCM 95th %tile Q(veh)	-	- 0.1		0.1	-	

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	28	0	0	35	0
Future Vol, veh/h	0	28	0	0	35	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	30	0	0	38	0
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	76	0	0	0	0	0
Stage 1	0	-	-	-	-	-
Stage 2	76	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	927	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	947	-	-	-	-	-
Platoon blocked, %		-	-	-	-	-
Mov Cap-1 Maneuver	927	-	-	-	-	-
Mov Cap-2 Maneuver	927	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	947	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s		0				
HCM LOS	-					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	-	-		
HCM Lane V/C Ratio	-	-	-	-		
HCM Control Delay (s)	-	-	-	-		
HCM Lane LOS	-	-	-	-		
HCM 95th %tile Q(veh)	-	-	-	-		

HCM 6th Signalized Intersection Summary

1: Fairburn Rd (SR 92) & Riverside Pkwy

Vantage Data Center

Build 2025

							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	242	600	4	1668	56	241	1063
Future Volume (veh/h)	242	600	4	1668	56	241	1063
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1885	1856		1841	1781	1781	1841
Adj Flow Rate, veh/h	249	0		1720	0	248	1096
Peak Hour Factor	0.97	0.97		0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	3		4	8	8	4
Cap, veh/h	256			2197		276	2653
Arrive On Green	0.14	0.00		0.63	0.00	0.09	0.76
Sat Flow, veh/h	1795	2768		3589	1510	1697	3589
Grp Volume(v), veh/h	249	0		1720	0	248	1096
Grp Sat Flow(s),veh/h/ln	1795	1384		1749	1510	1697	1749
Q Serve(g_s), s	19.3	0.0		50.4	0.0	9.9	15.4
Cycle Q Clear(g_c), s	19.3	0.0		50.4	0.0	9.9	15.4
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	256			2197		276	2653
V/C Ratio(X)	0.97			0.78		0.90	0.41
Avail Cap(c_a), veh/h	256			2197		515	2653
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00		1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	59.7	0.0		19.0	0.0	35.8	5.9
Incr Delay (d2), s/veh	48.1	0.0		2.9	0.0	10.6	0.5
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	17.7	0.0		26.6	0.0	14.2	8.5
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	107.8	0.0		21.9	0.0	46.5	6.4
LnGrp LOS	F			C		D	A
Approach Vol, veh/h	249			1720			1344
Approach Delay, s/veh	107.8			21.9			13.8
Approach LOS	F			C			B
Timer - Assigned Phs	1	2		4		6	
Phs Duration (G+Y+Rc), s	18.2	94.8		27.0		113.0	
Change Period (Y+Rc), s	* 5.7	6.8		7.0		6.8	
Max Green Setting (Gmax), s	* 32	68.2		20.0		106.2	
Max Q Clear Time (g_c+I1), s	11.9	52.4		21.3		17.4	
Green Ext Time (p_c), s	0.7	14.0		0.0		23.5	

Intersection Summary

HCM 6th Ctrl Delay	25.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection						
Int Delay, s/veh	2.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	290	33	21	771	76	50
Future Vol, veh/h	290	33	21	771	76	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	8	0	0	3	0	0
Mvmt Flow	296	34	21	787	78	51
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	330	0	1142	313
Stage 1	-	-	-	-	313	-
Stage 2	-	-	-	-	829	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1241	-	224	732
Stage 1	-	-	-	-	746	-
Stage 2	-	-	-	-	432	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1241	-	217	732
Mov Cap-2 Maneuver	-	-	-	-	217	-
Stage 1	-	-	-	-	746	-
Stage 2	-	-	-	-	419	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.2		25.6	
HCM LOS	D					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	301	-	-	1241	-	
HCM Lane V/C Ratio	0.427	-	-	0.017	-	
HCM Control Delay (s)	25.6	-	-	8	0	
HCM Lane LOS	D	-	-	A	A	
HCM 95th %tile Q(veh)	2	-	-	0.1	-	

HCM 6th Signalized Intersection Summary

3: Thornton Rd (SR 6) & Riverside Pkwy

Vantage Data Center

Build 2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	152	216	199	128	336	14	255	1273	220	14	911	265
Future Volume (veh/h)	152	216	199	128	336	14	255	1273	220	14	911	265
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1826	1870	1767	1841	1678	1900	1781	1633	1559	1707	1856
Adj Flow Rate, veh/h	162	230	0	136	357	0	271	1354	0	15	969	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	10	5	2	9	4	15	0	8	18	23	13	3
Cap, veh/h	203	294		211	262		159	1980		22	1661	
Arrive On Green	0.10	0.16	0.00	0.07	0.14	0.00	0.09	0.58	0.00	0.01	0.51	0.00
Sat Flow, veh/h	1668	1826	1585	1682	1841	1422	1810	3385	1384	1485	3244	1572
Grp Volume(v), veh/h	162	230	0	136	357	0	271	1354	0	15	969	0
Grp Sat Flow(s),veh/h/ln	1668	1826	1585	1682	1841	1422	1810	1692	1384	1485	1622	1572
Q Serve(g_s), s	13.9	20.6	0.0	11.7	24.2	0.0	14.9	47.1	0.0	1.7	35.3	0.0
Cycle Q Clear(g_c), s	13.9	20.6	0.0	11.7	24.2	0.0	14.9	47.1	0.0	1.7	35.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	203	294		211	262		159	1980		22	1661	
V/C Ratio(X)	0.80	0.78		0.64	1.36		1.71	0.68		0.68	0.58	
Avail Cap(c_a), veh/h	329	432		211	262		159	1980		235	1661	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.3	68.5	0.0	57.7	72.9	0.0	77.6	24.4	0.0	83.3	28.8	0.0
Incr Delay (d2), s/veh	8.4	5.6	0.0	6.5	185.8	0.0	344.3	1.9	0.0	30.4	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.4	15.1	0.0	9.1	37.5	0.0	34.7	25.1	0.0	1.5	19.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.8	74.1	0.0	64.2	258.7	0.0	421.8	26.4	0.0	113.7	30.3	0.0
LnGrp LOS	E	E		E	F		F	C		F	C	
Approach Vol, veh/h	392			493			1625			984		
Approach Delay, s/veh	70.2			205.0			92.3			31.6		
Approach LOS	E			F			F			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.6	106.2	20.0	35.1	21.0	93.9	23.1	32.0				
Change Period (Y+Rc), s	6.1	6.8	7.3	* 7.8	6.1	6.8	* 6.8	* 7.8				
Max Green Setting (Gmax), s	26.9	62.2	12.7	* 40	14.9	74.2	* 29	* 24				
Max Q Clear Time (g_c+I1), s	3.7	49.1	13.7	22.6	16.9	37.3	15.9	26.2				
Green Ext Time (p_c), s	0.0	10.1	0.0	1.0	0.0	14.2	0.4	0.0				

Intersection Summary

HCM 6th Ctrl Delay 88.6

HCM 6th LOS F

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection						
Int Delay, s/veh	3.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	50	74	0	21	32
Future Vol, veh/h	0	50	74	0	21	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	85	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	54	80	0	23	35
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	161	80	0	0	80	0
Stage 1	80	-	-	-	-	-
Stage 2	81	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	830	980	-	-	1518	-
Stage 1	943	-	-	-	-	-
Stage 2	942	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	818	980	-	-	1518	-
Mov Cap-2 Maneuver	818	-	-	-	-	-
Stage 1	943	-	-	-	-	-
Stage 2	928	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.9	0		2.9		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	980	1518	-	
HCM Lane V/C Ratio	-	-	0.055	0.015	-	
HCM Control Delay (s)	-	-	8.9	7.4	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0.2	0	-	

Intersection						
Int Delay, s/veh	4.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	37	37	0	16	16
Future Vol, veh/h	0	37	37	0	16	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	40	40	0	17	17
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	91	40	0	0	40	0
Stage 1	40	-	-	-	-	-
Stage 2	51	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	909	1031	-	-	1570	-
Stage 1	982	-	-	-	-	-
Stage 2	971	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	899	1031	-	-	1570	-
Mov Cap-2 Maneuver	899	-	-	-	-	-
Stage 1	982	-	-	-	-	-
Stage 2	960	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.6	0		3.7		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 1031		1570	-	
HCM Lane V/C Ratio	-	- 0.039		0.011	-	
HCM Control Delay (s)	-	- 8.6		7.3	0	
HCM Lane LOS	-	- A		A	A	
HCM 95th %tile Q(veh)	-	- 0.1		0	-	

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	37	0	0	16	0
Future Vol, veh/h	0	37	0	0	16	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	40	0	0	17	0
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	34	0	0	0	0	0
Stage 1	0	-	-	-	-	-
Stage 2	34	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	979	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	988	-	-	-	-	-
Platoon blocked, %		-	-	-	-	-
Mov Cap-1 Maneuver	979	-	-	-	-	-
Mov Cap-2 Maneuver	979	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	988	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s		0				
HCM LOS	-					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	-	-		
HCM Lane V/C Ratio	-	-	-	-		
HCM Control Delay (s)	-	-	-	-		
HCM Lane LOS	-	-	-	-		
HCM 95th %tile Q(veh)	-	-	-	-		

Appendix E: ITE Trip Generation Sheets

Land Use: 160

Data Center

Description

A data center is a free-standing warehouse type of facility that is primarily used for off-site storage of computer systems and associated components including applications and secure data. Some data centers may include maintenance areas and a small office. Data centers may be occupied by single or multiple tenants. Data centers typically have a small number of employees and visitors.

Additional Data

For the two data sites with time-of-day data, the AM and PM peak hours for the sites were between 6:30 and 7:30 a.m. and 3:00 and 4:00 p.m., respectively.

The sites were surveyed in the 2010s in Illinois and Virginia.

Caution should be used when applying trip generation rates for data centers, as the database contains a small number of sites with limited data on the number of tenants and employees. To assist in the future analysis of this land use, it is important that this information be reported.

Source Numbers

660, 958

Data Center (160)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. 1000 Sq. Ft. GFA: 169

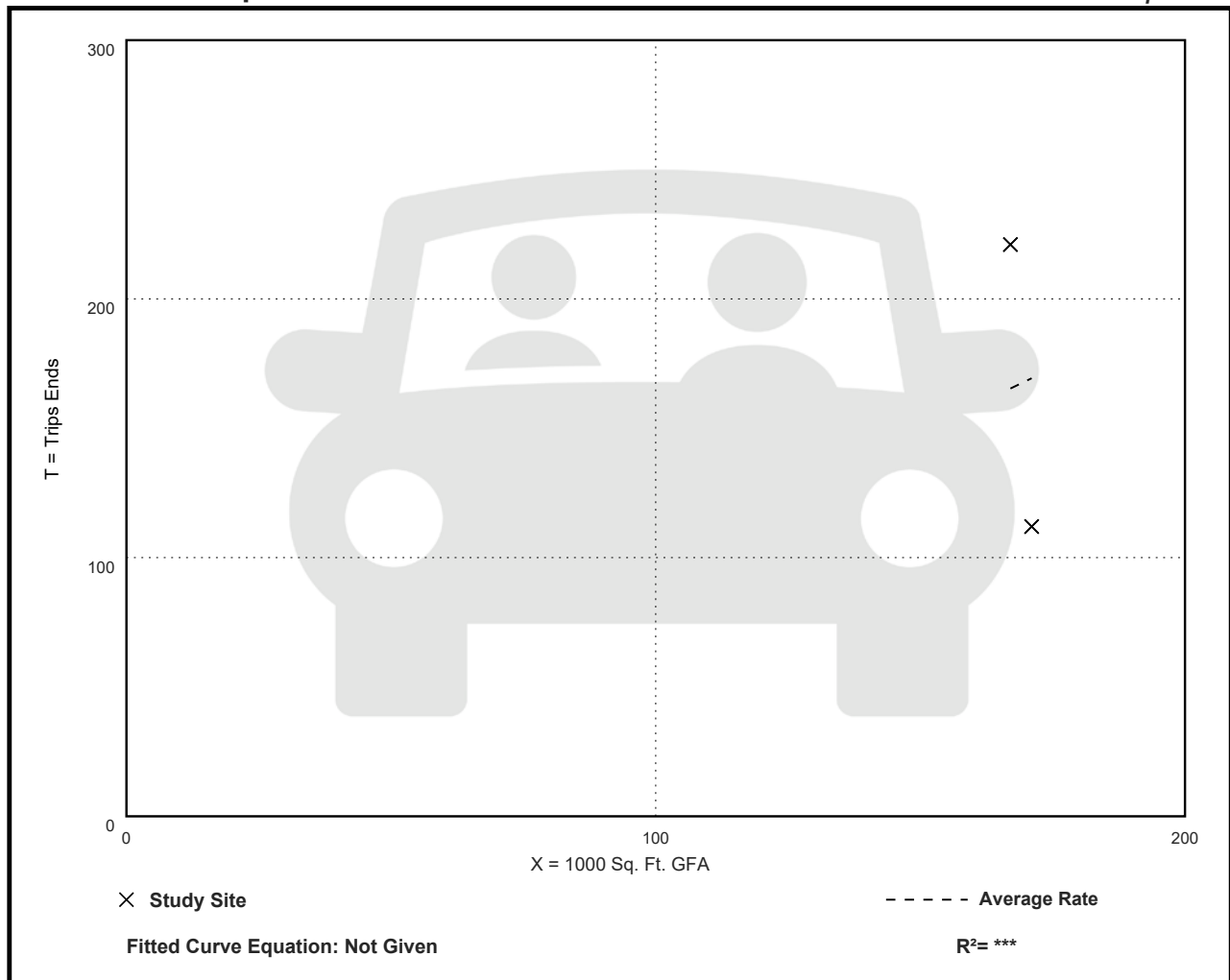
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.99	0.65 - 1.32	***

Data Plot and Equation

Caution – Small Sample Size



Data Center (160)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 6

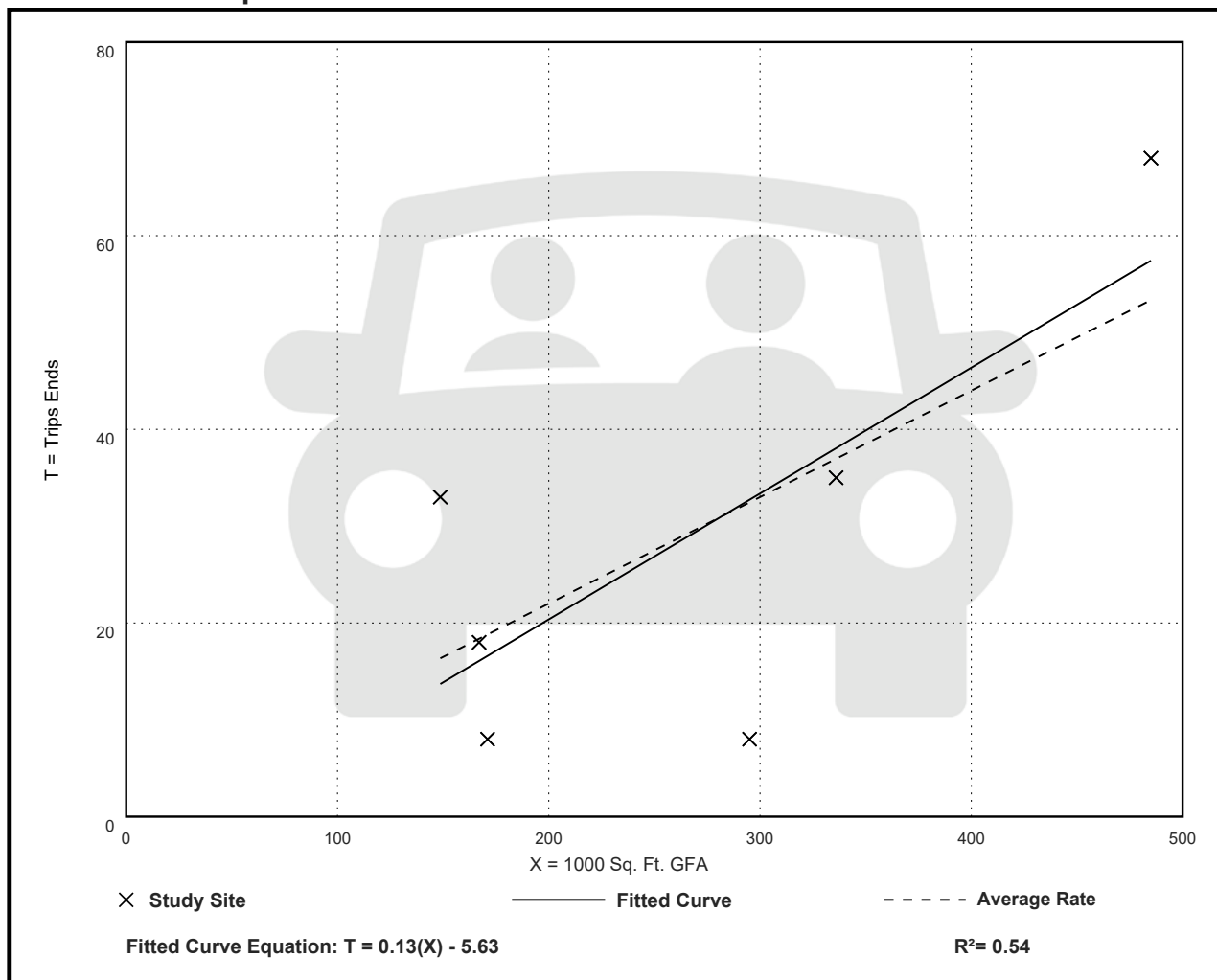
Avg. 1000 Sq. Ft. GFA: 267

Directional Distribution: 55% entering, 45% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.11	0.03 - 0.22	0.06

Data Plot and Equation



Data Center (160)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 5

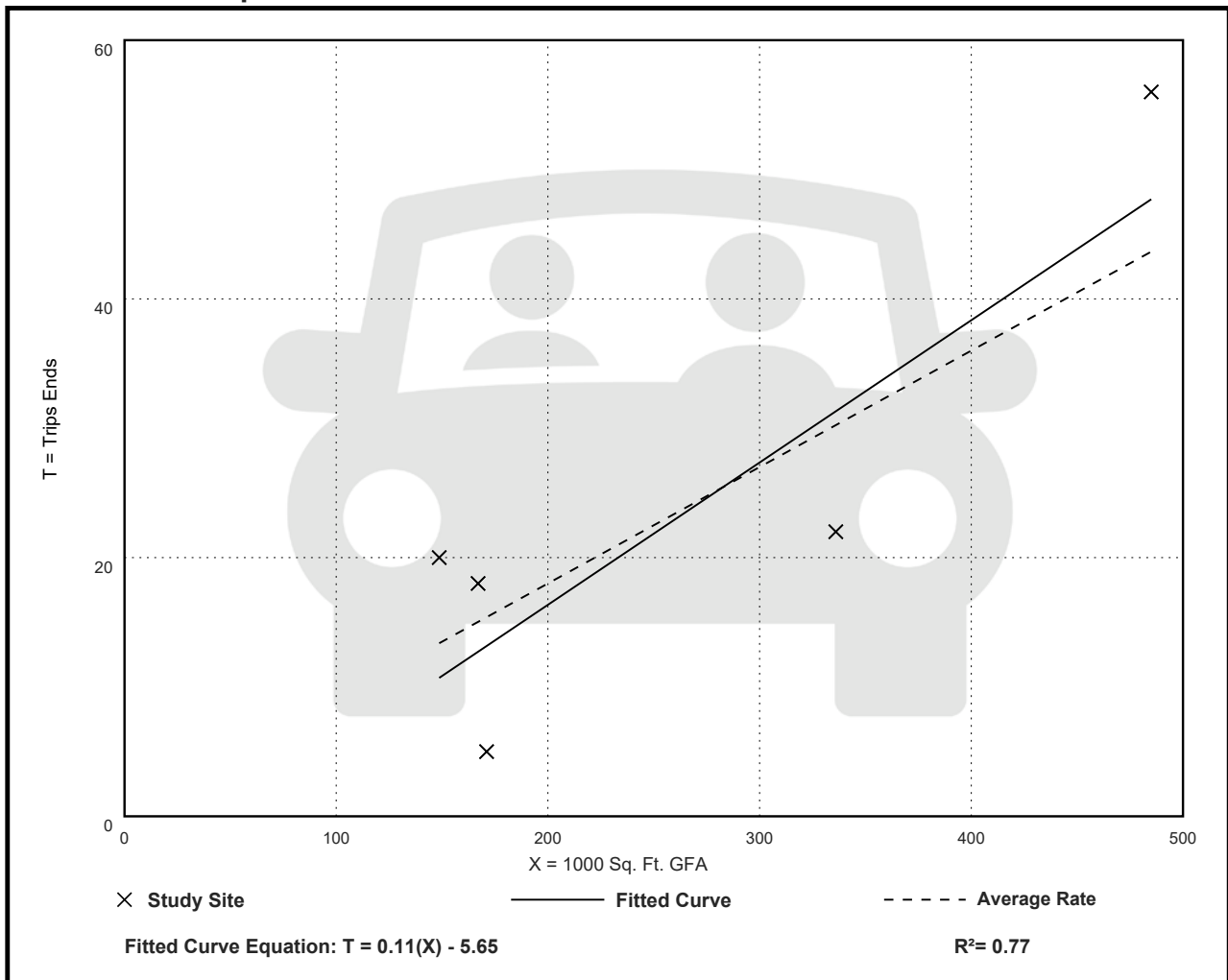
Avg. 1000 Sq. Ft. GFA: 262

Directional Distribution: 30% entering, 70% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.09	0.03 - 0.13	0.04

Data Plot and Equation



Appendix F: Turn Lane Warrant Standards

4.9 Auxiliary Turn Lanes

4.9.1 When Deceleration Lanes Are Required

The provisions of this section should generally apply to auxiliary lanes installed on the approach to an intersection that provide for deceleration and storage of vehicles waiting to turn right or left. Such lanes are always beneficial and will be required in conjunction with commercial driveway permits when projected traffic volumes exceed minimum levels as provided in the sections below.

All existing utilities which would be under new pavement or in auxiliary/deceleration lanes should be relocated before final grading and paving, and at no cost to DOT. Existing utilities which are found to be not in conflict with construction may be allowed if a Retention Request is processed by the utility owner and approved by the Department.

4.9.1.1 Minimum Requirements for Right Turn Deceleration Lanes

Right turn deceleration lanes must be constructed at no cost to the Department if the daily site generated Right Turn Volumes (RTV) based on ITE Trip Generation (assuming a reasonable distribution of entry volumes) meet or exceed the values shown in Table 4-6. Passing lane sections fall under the criteria for two or more lanes.

Posted Speed	2 Lane Routes		More than 2 Lanes on Main Road	
	AADT		AADT	
	< 6,000	>=6,000	<10,000	>=10,000
35 MPH or Less	200 RTV a day	100 RTV a day	200 RTV a day	100 RTV a day
40 to 50 MPH	150 RTV a day	75 RTV a day	150 RTV a day	75 RTV a day
55 to 60 MPH	100 RTV a day	50 RTV a day	100 RTV a day	50 RTV a day
>= 65 MPH	Always	Always	Always	Always

Table 4-6 Minimum Volumes Requiring Right Turn Lanes

In the event the District Traffic Engineer determines that field conditions or other factors indicate that it would be in the best interest of the Department, use the form in **Appendix F** to document a waiver for the deceleration lane requirement, the District Traffic Engineer must document the recommendations using the form in **Appendix F**. The recommendations shall be approved by the District Engineer and be attached to the Permit. The District Traffic Engineer may also require the addition of a Right Turn lane, even when the conditions in Table 4-6 are not met, if roadway geometry or field conditions indicate that the safety of the traveling public would be improved. The recommendation must be documented and approved by the District Traffic Engineer for inclusion with the Permit.

The R/W for auxiliary/deceleration lanes may be dedicated in fee simple to the Department for the Department to maintain or the applicant must sign an agreement with the Department to maintain the lane to the Department's standards and to hold harmless the Department in the event that section of roadway is identified in any liability action. A Limited Warranty Deed is not acceptable when R/W is donated to the Department. See section 2.5 for details regarding RW dedication procedures.

The pavement specifications for auxiliary/deceleration lanes must be Georgia DOT Standard Specifications for Construction of Roads and Bridges, or be as described and approved by the Chief Engineer in cases where a lesser design may be acceptable, or where a proposed project is expected to tie in.

4.9.1.2 Minimum Requirements for Left Turn Lanes

Left turn lanes must be constructed at no cost to the Department if the daily site generated Left Turn Volumes (LTV) based on ITE Trip Generation (assuming a reasonable distribution of entry volumes) meet or exceed the values shown in Table 4-7a **Condition 1**. If the LTVs are below the requirements for **Condition 1**, the applicant may be required to construct a Right Hand Passing Lane (see **Figure 4-7** if they meet the criteria in Table 4-7b **Condition 2**). The District Traffic Engineer will use engineering judgment to determine if the field conditions would allow construction of the Right Hand Passing Lane. Passing lane sections fall under the criteria for two or more lanes.

Condition 1

LEFT TURN REQUIREMENTS-FULL CONSTRUCTION				
Posted Speed	2 Lane Routes		More than 2 Lanes on Main Road	
	ADT		ADT	
	<6,000	>=6,000	<10,000	>=10,000
35 MPH or Less	300 LTV a day	200 LTV a day	400 LTV a day	300 LTV a day
40 to 50 MPH	250 LTV a day	175 LTV a day	325 LTV a day	250 LTV a day
>= 55 MPH	200 LTV a day	150 LTV a day	250 LTV a day	200 LTV a day

Table 4-7a Minimum Volumes Requiring Left Turn Lanes

Condition 2

LEFT TURN REQUIREMENTS w/Right Hand Passing Lane Option		
Posted Speed	2 Lane Routes only	
	ADT	
	<4,000	>=4,000
35 MPH or Less	200 LTV a day	125 LTV a day
40 to 45 MPH	100 LTV a day	75 LTV a day
50 to 55 MPH	75 LTV a day	50 LTV a day

Table 4-7b Minimum Volumes Requiring Right Hand Passing Lanes

SPEED (MPH)	FULL WIDTH STORAGE, FT.	TAPER, FT.
25	50	50
30	75	50
35	100	50
40	150	50
45	175	100
50	225	100
55	250	100
60	300	100
65	350	100

Table 4-8 Minimum Right Turn Deceleration Lengths

When traffic studies are conducted, the length of full-width lane needed for storage should be determined. If the length of full-width storage is greater than the length of full-width storage shown in Table 4-8, the longer length should be provided.

At signalized intersections, the amount of storage for both right and left turns can be based on the number of vehicles arriving during 1.5 signal cycles.

For unsignalized intersections, left turn storage should accommodate vehicles arriving during a two-minute period. Minimal storage is required for right turn lanes utilizing yield control at unsignalized intersections.

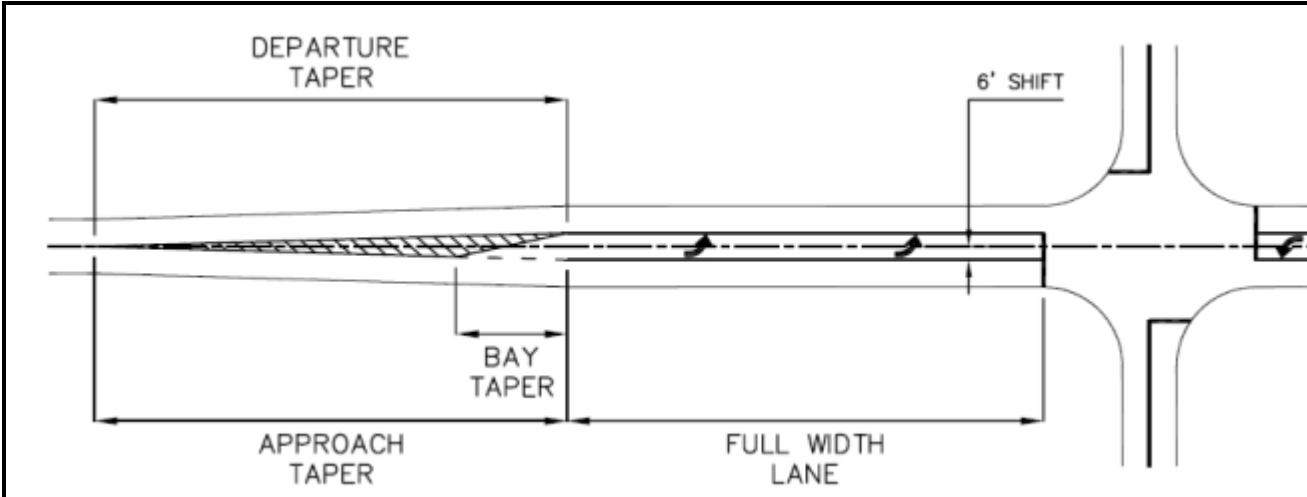
4.9.3 Acceleration Lanes

Acceleration lanes are generally not provided on low speed highways. Acceleration lanes may be required at locations where grade, sight distance or traffic is such that the Department determines they are needed. When operating speeds on the highway are 55 MPH and above, full-width acceleration lanes designed to meet the AASHTO minimum length should be considered.

4.9.4 Left Turn Lane Design

The design of left turn lanes should consider the intended function and the characteristics of the highway. In many cases, it is necessary to widen the existing roadway to introduce the left turn lane. In most cases vehicles approaching the turn lane are shifted to the right (especially when using symmetrical widening). The left turning traffic is then shifted back into the lane. Through traffic is returned to its original lane beyond the intersection. When the highway has a median that is at least 20 feet wide, the left turn lane can typically be developed out of the median, avoiding the need for transitions.

The basic design elements of left turn lanes are illustrated in Table 4-9. This example shows symmetrical widening, which basically requires the through traffic on each side to shift by one half of the lane width. Some circumstances may dictate that all widening be achieved on one side, which requires a full lane shift for through traffic on the side where the additional width is developed. Table 4-9 provides guidelines for selecting the proper length of approach taper. When shifts are not 6' or 12', use table 4-9 bay taper.



POSTED SPEED LIMIT, MPH	APPROACH AND DEPARTURE TAPER, FT.		BAY TAPER, FT.	FULL WIDTH STORAGE, FT
	6' Shift	12' Shift		
25	65	130	50	85
30	90	180	50	135
35	125	250	50	160
40	160	320	50	210
45	270	540	100	235
50	300	600	100	285
55	330	660	100	310
60	360	720	100	360
65	390	780	100	410

Table 4-9 Minimum Design Elements of Left Turn Lanes

The example shown in Table 4-9 has straight-line tapers. These are acceptable but other designs may also be used, including the following: partial tangent tapers, symmetrical reverse curve, and asymmetrical reverse curve. See latest edition of AASHTO Green Book for details.

The required length of full-width storage shall be based on storage length and a deceleration length that allows vehicles to safely decelerate without a possible conflict with another vehicle (Refer to [Construction Detail M-3A](#)). This should be determined in the traffic study. The amount of storage is dependent on the type of traffic control in effect. For signalized intersections, the storage should be sufficient to accommodate the number of vehicles arriving during 1.5 signal cycles, using peak hour volumes. At stop-controlled intersections, the storage is typically based on the number of vehicles arriving during a two-minute period within the peak hour.